



EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert No. GYJ23.1286X

Manufacturer	Endress + Hauser Flowtec AG (Address: CH-4153, Reinach BL1, Switzerland)
Product	Vortex Flowmeter
Model	Proline Prowirl C/D/F/R/O 200
Ex marking	Refer to the attachment for details
Product standard	/
Drawing number	961001890-B

The product was found to comply with the following standard(s):
GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.3-2021,GB/T 3836.4-2021,
GB3836.20-2010,GB/T 3836.31-2021

Valid until: 2028.11.06

Remarks

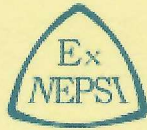
- 1.Conditions for safe use are specified in the attachment to this certificate.
- 2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment to this certificate.
- 3.Safe parameters specified in the attachment to this certificate.
- 4.This 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 2023.11.07

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



(GYJ23.1286X)

(Attachment I)

**Attachment I to GYJ23.1286X
(translation)**

1. Description

Proline Prowirl C/D/F/R/O 200 series Vortex Flowmeter, manufactured by Endress+Hauser Flowtec AG, has been certified accords with following standards:

GB/T 3836.1-2021 Explosive atmospheres-Part 1: Equipment-General requirements

GB/T3836.2-2021 Explosive atmospheres-Part 2: Equipment protection by flameproof enclosure“d”

GB/T3836.3-2021 Explosive atmospheres-Part 3: Equipment protection by increased safety“e”

GB/T 3836.4-2021 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety“i”

GB 3836.20-2010 Explosive atmospheres-Part 20: Equipment with equipment protection level (EPL) Ga

GB/T3836.31-2021 Explosive atmospheres-Part 31: Equipment dust ignition protection by enclosure“t”

The Ex marking is Ex ia IIC T1...T6 Ga, Ex ia IIC T1...T6 Ga/Gb, Ex db [ia] IIC T1...T6 Ga/Gb, Ex ic [ia] IIC T1...T6 Ga/Gc,

Ex ec IIC T1...T6 Gc, Ex ec [ia Ga] IIC T1...T6 Gc, Ex ic IIC T1...T6 Gc, Ex ic [ia Ga] IIC T1...T6 Gc, Ex ia IIC T1...T6 Gb,

Ex db [ia] IIC T1...T6 Gb, Ex tb IIIC T** °C Db, its certificate number is GYJ23.1286X.

The order code of the approved product is detailed as below:

Proline Prowirl C 200:

7C2Bcc-dd e f □□□□□□□□+###

O7C2Bcc-dd e f □□□□□□□□+###

Proline Prowirl D 200:

7D2Bcc-dd e f □□□□□□□□+###

O7D2Bcc-dd e f □□□□□□□□+###

7D2Ccc-dd e f □□□□□□□□□□□□+###

O7D2Ccc-dd e f □□□□□□□□□□□□+###

Proline Prowirl F 200:

7F2Bcc-dd e f □□□□□□□□+###

O7F2Bcc-dd e f □□□□□□□□+###

7F2Ccc-dd e f □□□□□□□□□□□□+###

O7F2Ccc-dd e f □□□□□□□□□□□□+###

Proline Prowirl R 200:

7R2Bcc-dd e f □□□□□□□□+###

O7R2Bcc-dd e f □□□□□□□□+###

7R2Ccc-dd e f □□□□□□□□□□□□+###

O7R2Ccc-dd e f □□□□□□□□□□□□+###

Proline Prowirl O 200:

7O2Bcc-dd e f □□□□□□□□+###

O7O2Bcc-dd e f □ □ □ □ □ □ □ □ + # ** #

7O2Ccc-dd e f □ □ □ □ □ □ □ □ □ □ □ □ + # ** #

O7O2Ccc-dd e f □ □ □ □ □ □ □ □ □ □ □ □ + # ** #

Proline Prowirl 200 transmitter only:

7X2BXX-dd e f □ □ + # ** #

O7X2BXX-dd e f □ □ + # ** #

7X2CXX-dd e f □ □ □ □ □ + # ** #

O7X2CXX-dd e f □ □ □ □ □ □ + # ** #

cc indicates nominal diameter, including combination of number(s) and letter(s) for sizes up to DN300 (2 digits);

dd indicates NEPSI approval code, including , ND=Ex ic [ia] IIC T1...T6 Ga/Gc or

Ex ic [ia] IIC T1...T6 Gc ³⁾⁴⁾ or

Ex ic [ia Ga] IIC T1...T6 Gc ¹⁾³⁾,

NK²⁾=Ex ec IIC T1...T6 Gc or Ex ec [ia Ga] IIC T1...T6 Gc¹⁾,

NH=Ex ic IIC T1...T6 Gc or Ex ic [ia Ga] IIC T1...T6 Gc¹⁾,

NF=Ex ia IIC T1...T6 Gb ,

NJ=Ex db [ia] IIC T1...T6 Gb ,

N4²⁾=Ex ia IIC T1...T6 Ga/Gb,

Ex ia IIC T1...T6 Gb³⁾,

Ex tb IIIC T** °C Db⁴⁾,

N5²⁾=Ex db [ia] IIC T1...T6 Ga/Gb,

Ex db [ia] IIC T1...T6 Gb³⁾,

Ex tb IIIC T** °C Db⁴⁾;

e indicates output type, including A=4 ~ 20mA HART,

B=4 ~ 20mA HART+pulse/frequency/switch output,

C=4 ~ 20mA HART+4 ~ 20mA,

D=4 ~ 20mA HART+pulse/frequency/switch output,

E=Foundation Fieldbus + pulse/frequency/switch output,

G=Profibus PA + pulse/frequency/switch output,

X=sensor only;

f indicates display, operation, including L, M prepared for FHX50

Any other single number or letter.

□ indicates enclosure, cable (remote version), cable gland, sensor version, sealing, pressure sensor, process connection, calibration, device model and customer version;

** indicates option;

indicates additional options, not relevant for safety.

Note: ¹⁾ Marking for Flowmeters with display code f = L or M only.

²⁾ Approval code dd=NK,N4,N5 not available for versions with pressure sensor.

³⁾ Marking for remote version.

⁴⁾ Marking for Flowmeters without display code f = L or M .

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 For information on the dimensions of the flameproof joints contact the manufacturer (flameproof product only, approval code **dd** = NJ or N5).

2.2 Ambient temperature range: -50°C ~ +70°C¹⁾²⁾ (compact Flowmeters);
-50°C ~ +75°C¹⁾²⁾ (remote Flowmeters, Transmitter);
-60°C ~ +85°C (remote Flowmeters, Sensor);

Note: ¹⁾minimum temperature -60°C for product with **dd** = NK and **e** = A, B or D;

²⁾maximum temperature restricted to +65°C for product with **e** = D.

For ambient temperature below -40°C, only enclosure-variants without breathing element are allowed.

3. Conditions for Safe Use

3.1 The external earth connection facility of the enclosure should be connected reliably (symbol **dd** = NK,NJ or N5).

3.2 When symbol **dd** = NK,NJ or N5, any maintenance shall be performed only when the warning "Do not open when energized" is observed.

3.3 When symbol **dd** = NJ or N5, suitable certified cable glands or blanking plugs for unused holes approved by ExTL according to GB/T3836.1-2021 and GB/T3836.2-2021 with Ex marking "Ex db II C Gb" shall be used and correctly installed (for the terminal compartment).

3.4 Process temperature range: -200°C ~ +450°C. For process temperature >440°C additional heat of source shall be observed, so that ignition temperature of T1 will not be exceeded.

3.5 The relationship between max. ambient temperature, max. medium temperature and temperature class is shown as following:

Compact versions Mode code: NJA, N4A, N5A, NKA, NDA, NHA,NFA	T _{med}						
	Temp. Class (T*)	T6 ³⁾ (85°C)	T5 ³⁾ (100°C)	T4 ³⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	40°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
	60°C ¹⁾²⁾	-	95°C	130°C	195°C	280°C	280°C
	65°C	-	-	130°C	195°C	280°C	280°C
	70°C	-	-	130°C	130°C	130°C	130°C
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	40°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
	60°C ¹⁾²⁾	-	95°C	130°C	195°C	290°C	450°C
	70°C	-	-	130°C	195°C	290°C	450°C

Note: ¹⁾ for versions with approval code ND, NH, NF, N4 and provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

²⁾ for versions with pressure tapping Tamb (max) is limited for T5 to 55°C.

³⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl

F/R/O. The minimum length of the tube shall not be less than 50cm.

Remote transmitters Mode code: NJA, N4A, N5A, NKA, NDA, NHA, NFA	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline Prowirl C/D/F/R/O 200	40°C ¹⁾	60°C ¹⁾	75°C

Note: ¹⁾ for versions with approval code NF, N4, ND, NH and provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

Remote sensors Mode code: NJA, N4A, N5A, NKA, NDA, NHA, NFA	T _{med}						
	Temp. Class (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	70°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	85°C	-	-	130°C	195°C	280°C	280°C
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	70°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	85°C	-	-	130°C	195°C	290°C	450°C

Note: ¹⁾ for versions with pressure tapping Tamb (max) is limited for T6 to 40°C and T5 to 55°C.

²⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Compact versions Mode code: NFB, N4B, NDB, NHB	T _{med}						
	Temp. Class (T*)	T6 ⁵⁾ (85°C)	T5 ⁵⁾ (100°C)	T4 ⁵⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	35°C ¹⁾²⁾	80°C	95°C	130°C	195°C	280°C	280°C
	50°C ¹⁾²⁾	-	95°C	130°C	195°C	280°C	280°C
	60°C	-	-	130°C	195°C	280°C	280°C
	65°C	-	-	130°C	195°C	280°C ³⁾	280°C ³⁾
	70°C	-	-	130°C	195°C ³⁾	280°C ³⁾	280°C ³⁾
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	35°C ¹⁾²⁾	80°C	95°C	130°C	195°C	290°C	450°C
	50°C ¹⁾²⁾	-	95°C	130°C	195°C	290°C	450°C
	65°C	-	-	130°C	195°C	290°C	450°C
	70°C	-	-	130°C	195°C ⁴⁾	290°C ⁴⁾	450°C ⁴⁾

Note: ¹⁾ for versions provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

²⁾ for PFS circuit with $P_i = 0.85W$, the maximum ambient temperature increased by 5K.

³⁾ for versions with sensor specified for $T_m \leq 280^\circ C$, the indicated maximum ambient temperature is applicable only if for the PFS circuit $P_i = 0.7W$.

⁴⁾ for other sensors, the maximum ambient temperature is applicable if for the PFS circuit $P_i = 0.85W$.

⁵⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to $40^\circ C$ and for T4 to $90^\circ C$. For Process temperatures $> 90^\circ C$, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Remote transmitters Mode code: NFB, N4B, NDB, NHB	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline	35°C ¹⁾	50°C ¹⁾	70°C
Prowirl C/D/F/R/O 200	40°C ¹⁾²⁾	60°C ¹⁾²⁾	75°C ²⁾

Note: ¹⁾ for versions provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

²⁾ maximum ambient temperature is applicable only if for the PFS circuit $P_i = 0.85W$.

Remote sensors Mode code: NFB, N4B, NDB, NHB	T _{med}						
	Temp. Class (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	70°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	85°C	-	-	130°C	195°C	280°C	280°C
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
	70°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	85°C	-	-	130°C	195°C	290°C	450°C

Note: ¹⁾ for versions with pressure tapping Tamb (max) is limited for T6 to $40^\circ C$ and T5 to $55^\circ C$.

²⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to $40^\circ C$ and for T4 to $90^\circ C$. For Process temperatures $> 90^\circ C$, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Compact versions Mode code: NJB, N5B, NKB	T _{med}						
	Temp. Class (T*)	T6 ³⁾ (85°C)	T5 ³⁾ (100°C)	T4 ³⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	40°C	80°C	95°C	130°C	195°C	280°C	280°C
	55°C	-	95°C	130°C	195°C	280°C	280°C
	65°C	-	-	130°C	195°C	280°C ¹⁾	280°C ¹⁾
	70°C	-	-	130°C	195°C ¹⁾	280°C ¹⁾	280°C ¹⁾
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	40°C	80°C	95°C	130°C	195°C	290°C	450°C
	55°C	-	95°C	130°C	195°C	290°C	450°C
	65°C	-	-	130°C	195°C	290°C	450°C
	70°C			130°C	195°C ²⁾	290°C ²⁾	450°C ²⁾

Note: ¹⁾ for versions with sensor specified for T_m ≤ 280°C, the indicated maximum ambient temperature is applicable only if for the PFS circuit P_{max} = 0.7W;

²⁾ for other sensors, the maximum ambient temperature is applicable if for the PFS circuit P_{max} = 0.85W.

³⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Remote transmitters Mode code: NJB, N5B, NKB	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline Prowirl C/D/F/R/O 200	40°C	55°C	70°C
			75°C ¹⁾

Note: ¹⁾ maximum ambient temperature 75°C is applicable only if for the PFS circuit P_{max} = 0.85W.

Remote sensors Mode code: NJB, N5B, NKB	T _{med}						
	Temp. Class (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	55°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
	70°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	85°C	-	-	130°C	195°C	280°C	280°C
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	55°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
	70°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	85°C	-	-	130°C	195°C	290°C	450°C

Note: ¹⁾ for versions with pressure tapping T_{amb} (max) is limited for T6 to 40°C and T5 to 55°C.

²⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure

sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Compact versions Mode code: NJC, N4C, N5C, NKC, NDC, NHC, NFC	Temp. Class (T*)	T _{med}					
		T6 ⁴⁾ (85°C)	T5 ⁴⁾ (100°C)	T4 ⁴⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	Ta(max)						
	40°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
	55°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	60°C	-	-	130°C	195°C	280°C	280°C
	65°C	-	-	130°C	195°C	280°C ²⁾	280°C ²⁾
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	70°C	-	-	130°C	130°C	130°C	130°C
	40°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
	55°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	65°C	-	-	130°C	195°C	290°C	450°C
	70°C			130°C	195°C ³⁾	290°C ³⁾	450°C ³⁾

Note: ¹⁾ for versions with approval code NF, N4, ND, NH and provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

²⁾ for versions with sensor specified for T_m ≤ 280°C, the maximum ambient temperature is 65°C if supply/output circuit at terminals 3 and 4 is not used (P_i = 0W or P_{max} = 0W).

³⁾ for versions with sensor, the maximum ambient temperature is 70°C if supply/output circuit at terminals 3 and 4 is not used (P_i = 0W or P_{max} = 0W).

⁴⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Remote transmitters Mode code: NJC, N4C, N5C, NKC, NDC, NHC, NFC	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline Prowirl C/D/F/R/O 200	40°C ¹⁾	55°C ¹⁾	70°C
			75°C ²⁾

Note: ¹⁾ for versions with approval code NF, N4, ND, NH and provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

²⁾ maximum ambient temperature is applicable only if the supply/output circuit at terminals 3 and 4 is not used (P_i = 0W or P_{max} = 0W).

Remote sensors Mode code: NJC, N4C, N5C, NKC, NDC, NHC, NFC	T _{med}						
	Temp. Class (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	70°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	85°C	-	-	130°C	195°C	280°C	280°C
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	70°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	85°C	-	-	130°C	195°C	290°C	450°C

Note: ¹⁾ for versions with pressure tapping Tamb (max) is limited for T6 to 40°C and T5 to 55°C.

²⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Compact versions Mode code: NJD, N4D, N5D, NKD, NDD, NHD, NFD	T _{med}						
	Temp. Class (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	35°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	50°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	55°C	-	-	-	195°C	280°C	280°C
	60°C	-	-	-	195°C	195°C	195°C
Proline	35°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	50°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	55°C	-	-	-	195°C	290°C	450°C
	60°C	-	-	-	195°C	290°C	450°C
	65°C	-	-	-	-	290°C	290°C

Note: ¹⁾ for versions with approval code NF, N4, ND, NH and provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

²⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Remote transmitters Mode code: NJD, N4D, N5D, NKD, NDD, NHD, NFD	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline Prowirl C/D/F/R/O 200	35°C ¹⁾	50°C ¹⁾	65°C

Note: ¹⁾ for versions with approval code NF, N4, ND, NH and provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

Remote sensors Mode code: NJD, N4D, N5D, NKD, NDD, NHD, NFD	T _{med}						
	Temp. Class (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	55°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
	70°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	85°C	-	-	130°C	195°C	280°C	280°C
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	55°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
	70°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	85°C	-	-	130°C	195°C	290°C	450°C

Note: ¹⁾ for versions with pressure tapping Tamb (max) is limited for T6 to 40°C and T5 to 55°C.

²⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Compact versions Mode code: NFE, NJE, N4E, N5E, NKE, NFG NJG, N4G, N5G, NKG, NDE, NHE, NDG, NHG	T _{med}						
	Temp. Class (T*)	T6 ⁵⁾ (85°C)	T5 ⁵⁾ (100°C)	T4 ⁵⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	40°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
	50°C ^{1) 2)}	-	95°C	130°C	195°C	280°C	280°C
	60°C	-	-	130°C	195°C	280°C	280°C
	65°C	-	-	130°C	195°C	280°C ³⁾	280°C ³⁾
	70°C	-	-	130°C	195°C ⁴⁾	280°C ⁴⁾	280°C ⁴⁾
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	40°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
	50°C ^{1) 2)}	-	95°C	130°C	195°C	290°C	450°C
	65°C	-	-	130°C	195°C	290°C	450°C
	70°C			130°C	195°C ⁴⁾	290°C ⁴⁾	450°C ⁴⁾

Note: ¹⁾ for versions with approval code NF, N4, ND, NH and provided with option OVP or TRM, for

temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

- 2) maximum ambient temperature is 60°C if PFS circuit not used.
- 3) maximum ambient temperature is 65°C if PFS circuit not used.
- 4) maximum ambient temperature is 70°C if PFS circuit not used.

5) for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

Remote transmitters Mode code: NFE, NJE, N4E, N5E, NKE, NFG NJG, N4G, N5G, NKG, NDE, NHE, NDG, NHG	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline Prowirl C/D/F/R/O 200	40°C ¹⁾	55°C ¹⁾	70°C
			75°C ²⁾

Note: ¹⁾ for versions with approval code NF, N4, ND, NH and provided with option OVP or TRM, for temperature class T6 and T5, the maximum ambient temperature decreases by 2K.

²⁾ maximum ambient temperature is 75°C if PFS circuit not used.

Remote sensors Mode code: NFE,NJE, N4E, N5E, NKE, NFG, NJG, N4G, N5G, NKG, NDE, NHE, NDG, NHG	T _{med}						
	Temp. Class (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	70°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	85°C	-	-	130°C	195°C	280°C	280°C
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	55°C ¹⁾	80°C	95°C	130°C	195°C	290°C	280°C
	70°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	85°C	-	-	130°C	195°C	290°C	450°C

Note: ¹⁾ for versions with pressure tapping Tamb (max) is limited for T6 to 40°C and T5 to 55°C.

²⁾ for versions with pressure tapping installed straight to Prowirl sensor, the maximum process temperature is limited for T6 and T5 to 40°C and for T4 to 90°C. For Process temperatures > 90°C, the pressure sensor type DPC21 has to be installed using a distance tube between pressure sensor and sensor of Prowirl F/R/O. The minimum length of the tube shall not be less than 50cm.

3.6 The product should be used in explosive gas atmospheres/ combustible dust atmospheres together with approved associated apparatus, follow the instruction manual of this product and associated apparatus when connecting the wiring. Connect the wiring terminals correctly.

3.6.1 Safe parameters

dde code	terminals	U _i	I _i	P _i	C _i	L _i
N4A NFA	1, 2	30V	300mA	1W	5nF	0mH
	3, 4	-	-	-	-	-
	5, 6	-	-	-	-	-
N4B NFB	1, 2	30V	300mA	1W	5nF	0mH
	3, 4	30V	300mA	1W	6nF	0mH
	5, 6	-	-	-	-	-
N4C NFC	1, 2	30V	300mA	1W	30nF	0mH
	3, 4	30V	300mA	1W	30nF	0mH
	5, 6	-	-	-	-	-
N4D NFD	1, 2	30V	300mA	1W	5nF	0mH
	3, 4	30V	300mA	1W	6nF	0mH
	5, 6	30V	300mA	1W	5nF	0mH
NFE N4E NFG N4G	1, 2	17.5V ¹⁾	550mA ¹⁾	5.5W ¹⁾	5nF ¹⁾	10μH ¹⁾
		30V	300mA	1.2W	5nF	10μH
	3, 4	30V	300mA	1W	6nF	0mH
	5, 6	-	-	-	-	-

Note: ¹⁾ the safe parameters meet all requirements for a FISCO Field Device

dde code	terminals	U _i	I _i	P _i	C _i	L _i
NDA NHA	1, 2	35V	-	1W	5nF	0mH
	3, 4	-	-	-	-	-
	5, 6	-	-	-	-	-
NDB NHB	1, 2	35V	-	1W	5nF	0mH
	3, 4	35V	-	1W	6nF	0mH
	5, 6	-	-	-	-	-
NDC NHC	1, 2	30V	-	1W	30nF	0mH
	3, 4	30V	-	1W	30nF	0mH
	5, 6	-	-	-	-	-
NDD NHD	1, 2	35V	-	1W	5nF	0mH
	3, 4	35V	-	1W	6nF	0mH
	5, 6	35V	-	1W	5nF	0mH
NDE NHE	1, 2	17.5V ¹⁾	- ¹⁾	- ¹⁾	5nF ¹⁾	10μH ¹⁾
		32V	300mA	-	5nF	10μH
NDG	3, 4	35V	300mA	1W	6nF	0mH
NHG	5, 6	-	-	-	-	-

Note: ¹⁾ the safe parameters meet all requirements for a FISCO Field Device

3.7 When the symbol **dd** = NJ, N5 or NK, the electrical data is as follows:

dde code	terminals	U _{nom}	U _{max}	P _{max}
NJA N5A N4A NKA	1, 2	35Vdc	250Vac	-
	3, 4	-	-	-
	5, 6	-	-	-
NJB N5B N4B NKB	1, 2	35Vdc	250Vac	-
	3, 4	35Vdc	250Vac	1W ¹⁾
	5, 6	-	-	-
NJC N5C N4C NKC	1, 2	30Vdc	250Vac	-
	3, 4	30Vdc	250Vac	-
	5, 6	-	-	-

NJD	1, 2	35Vdc	250Vac	-
N5D	3, 4	35Vdc	250Vac	1W ¹⁾
N4D				
NKD	5, 6	35Vdc	250Vac	-
NJE	1, 2	32Vdc	250Vac	0.88W
N5E	3, 4	35Vdc	250Vac	1W ¹⁾
N4E				
NJG				
N4G				
N5G	5, 6	-	-	-
NKE				
NKG				

Note: ¹⁾ this circuit is functionally limited by an internal resistance of 760.5Ω; herewith P_{max} may be determined.

3.8 When symbol f = L or M, the electrical data is as follows:

3.8.1 prepared for connection of FHX50 or any other suitable display in type of protection intrinsic safety

$$U_o = 7.3V \quad I_o = 157mA \quad P_o = 362mW \quad C_o = 388nF \quad L_o = 149 \mu H \quad C_c \leq 125nF \quad L_c \leq 149 \mu H$$

3.8.2 if used as interface in type of protection intrinsic safety

$$U_o = 7.3V \quad I_o = 327mA \quad P_o = 800mW; \quad U_i = 7.3V \quad C_i = 0nF \quad L_i = 0mH$$

3.8.3 if used as non-intrinsically safe interface

$$U_N = 6.5V$$

3.9 The pressure sensor DPC21 can be connected with following maximum values in type of protection intrinsic safety Ex ic or Ex ia IIC

$$U_o = 4.1V \quad I_o = 450mA \quad P_o = 150mW \quad C_o = 99.3 \mu F \quad L_o = 84 \mu H$$

3.10 This product can be connected to an separated certified interface, with following maximum values:

$$U_o = 7.3V \quad I_o = 100mA \quad P_o = 160mW \quad C_i = 0nF \quad L_i = 0mH$$

3.11 Clean the surface of this product termly when using in combustibile dust atmosphere.

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

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

GB/T 3836.13-2021 "Explosive atmospheres- Part 13:Equipment repair,overhaul,reclamation and modification".

GB/T 3836.15-2017 "Explosive atmospheres- Part 15:Electrical installations design, selection and erection".

GB/T 3836.16-2022 "Explosive atmospheres- Part 16:Electrical installations inspection and maintenance".

GB/T 3836.18-2017 "Explosive atmospheres-Part 18: Intrinsically safe electrical systems".

GB 50257-2014 "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".

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
2023.11.07



SITIiAS
Worldwide Access

防爆合格证

证号：GYJ23.1286X

制 造 商 恩德斯+豪斯公司

(地址：CH-4153, Reinach BL1, Switzerland)

产 品 名 称 涡街流量计

型 号 规 格 Proline Prowirl C/D/F/R/O 200

防 爆 标 志 详见合格证附件

产 品 标 准 /

图 样 编 号 961001890-B

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/T 3836.1-2021, GB/T 3836.2-2021, GB/T 3836.3-2021, GB/T 3836.4-2021,
GB3836.20-2010, GB/T 3836.31-2021

特颁发此证。

本证书有效期：2023年11月07日至2028年11月06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. 电气安全参数见本证书附件。
4. 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。

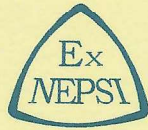


本证书仅对与认可文件和样品一致的产品有效。

地址：上海市漕宝路103号
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(GYJ23.1286X)

(Attachment I)

GYJ23.1286X防爆合格证附件 I

由恩德斯+豪斯公司生产的Proline Prowirl C/D/F/R/O 200型涡街流量计，经检验符合下列标准：

- GB/T 3836.1-2021 爆炸性环境 第1部分：设备 通用要求
- GB/T 3836.2-2021 爆炸性环境 第2部分：由隔爆外壳“d”保护的的设备
- GB/T 3836.3-2021 爆炸性环境 第3部分：由增安型“e”保护的的设备
- GB/T 3836.4-2021 爆炸性环境 第4部分：由本质安全型“i”保护的的设备
- GB 3836.20 - 2010 爆炸性环境 第20部分：设备保护级别（EPL）为Ga级的设备
- GB/T 3836.31-2021 爆炸性环境 第31部分：由防粉尘点燃外壳“t”保护的的设备

产品防爆标志Ex ia IIC T1...T6 Ga, Ex ia IIC T1...T6 Ga/Gb, Ex db [ia] IIC T1...T6 Ga/Gb, Ex ic [ia] IIC T1...T6 Ga/Gc, Ex ec IIC T1...T6 Gc, Ex ec [ia Ga] IIC T1...T6 Gc, Ex ic IIC T1...T6 Gc, Ex ic [ia Ga] IIC T1...T6 Gc, Ex ia IIC T1...T6 Gb, Ex db [ia] IIC T1...T6 Gb, Ex tb IIIC T** °C Db,防爆合格证号GYJ23.1286X。

本证书认可产品的订购号如下：

Proline Prowirl C 200:

7C2Bcc-dd e f□□□□□□□□+##*#

O7C2Bcc-dd e f□□□□□□□□+##*#

Proline Prowirl D 200:

7D2Bcc-dd e f□□□□□□□□+##*#

O7D2Bcc-dd e f□□□□□□□□+##*#

7D2Ccc-dd e f□□□□□□□□□□□□+##*#

O7D2Ccc-dd e f□□□□□□□□□□□□+##*#

Proline Prowirl F 200:

7F2Bcc-dd e f□□□□□□□□+##*#

O7F2Bcc-dd e f□□□□□□□□+##*#

7F2Ccc-dd e f□□□□□□□□□□□□+##*#

O7F2Ccc-dd e f□□□□□□□□□□□□+##*#

Proline Prowirl R 200:

7R2Bcc-dd e f□□□□□□□□+##*#

O7R2Bcc-dd e f□□□□□□□□+##*#

7R2Ccc-dd e f□□□□□□□□□□□□+##*#

O7R2Ccc-dd e f□□□□□□□□□□□□+##*#

Proline Prowirl O 200:

7O2B**cc** -**dd e f** □□□□□□□□+##**#

O7O2B**cc** -**dd e f** □□□□□□□□+##**#

7O2C**cc** -**dd e f** □□□□□□□□□□□□+##**#

O7O2C**cc** -**dd e f** □□□□□□□□□□□□□□+##**#

Proline Prowirl 200 transmitter:

7X2B**XX** -**dd e f** □□+##**#

O7X2B**XX** -**dd e f** □□□+##**#

7X2C**XX** -**dd e f** □□□□□+##**#

O7X2C**XX** -**dd e f** □□□□□□+##**#

其中：**cc**表示测量口径，可为两位数字或字母的组合，最大DN300；

dd表示NEPSI认证代码，可为ND=Ex ic [ia] IIC T1...T6 Ga/Gc 或
 Ex ic [ia] IIC T1...T6 Gc³⁾⁴⁾ 或
 Ex ic [ia Ga] IIC T1...T6 Gc¹⁾³⁾，
 NK²⁾=Ex ec IIC T1...T6 Gc 或
 Ex ec [ia Ga] IIC T1...T6 Gc¹⁾，
 NH=Ex ic IIC T1...T6 Gc 或
 Ex ic [ia Ga] IIC T1...T6 Gc¹⁾，
 NF=Ex ia IIC T1...T6 Gb，
 NJ=Ex db [ia] IIC T1...T6 Gb，
 N4²⁾=Ex ia IIC T1...T6 Ga/Gb，
 Ex ia IIC T1...T6 Gb³⁾，
 Ex tb IIIC T** °C Db⁴⁾，
 N5²⁾=Ex db [ia] IIC T1...T6 Ga/Gb，
 Ex db [ia] IIC T1...T6 Gb³⁾，
 Ex tb IIIC T** °C Db⁴⁾；

e表示输出型式，可为A=4~20mA HART，

B=4~20mA HART+pulse/frequency/switch output，

C=4~20mA HART+4~20mA，

D=4~20mA HART+pulse/frequency/switch output，

E=Foundation Fieldbus + pulse/frequency/switch output，

G=Profibus PA + pulse/frequency/switch output，

X=仅传感器；

f表示显示/操作，代码可为L、M（连接FHX50）或任意一个其它数字/字母；

□代码表示外壳、电缆（分离型）、电缆引入装置、传感器类型、密封、压力传感器、过程连接、校准、设备型号和客户信息。

**表示备选信息

#表示附加信息，与安全性能无关。

注：¹⁾ 仅适用于 $f = L$ 或 M 的产品。

²⁾ $dd = NK, N4, N5$ 不适用于有压力传感器的版本。

³⁾ 仅适用于分离型。

⁴⁾ 不适用于 $f = L$ 或 M 的产品。

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、涉及产品隔爆接合面的维修须联系产品制造商（隔爆产品， $dd = NJ$ 或 $N5$ ）。

2、产品使用环境温度： $-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ¹⁾²⁾（一体型）；
 $-50^{\circ}\text{C} \sim +75^{\circ}\text{C}$ ¹⁾²⁾（分离型变送器）；
 $-60^{\circ}\text{C} \sim +85^{\circ}\text{C}$ （分离型传感器）。

注：¹⁾ 代码 $dd = NK$ 且 $e = A, B$ 或 D 时，最低使用环境温度 -60°C ；

²⁾ 代码 $e = D$ 时，最高使用环境温度 $+65^{\circ}\text{C}$ 。

对于环境温度低于 -40°C 的情况，仅适用于外壳不带呼吸元件的产品。

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（ $dd = NK, NJ$ 或 $N5$ ）。

2、产品在现场维护使用时应遵循“严禁带电开盖”的原则（ $dd = NK, NJ$ 或 $N5$ ）。

3、产品接线腔的电缆引入口须配用经防爆检验认可、符合 GB/T 3836.1-2021 和 GB/T 3836.2-2021 标准且防爆等级为 Ex db II C Gb 的电缆引入装置或封堵件（ $dd = NJ$ 或 $N5$ ）。

4、产品介质温度范围： $-200^{\circ}\text{C} \sim +450^{\circ}\text{C}$ 。当介质温度高于 440°C 时，应注意额外的热源影响，以防产品最高表面温度超过 T1 对应的温度。

5、产品最高使用环境温度、最高介质温度和温度组别的关系如下：

一体型 型号： NJA, N4A, N5A, NKA, NDA, NHA, NFA	T _{med}						
	温度组别 (T*)	T6 ³⁾ (85°C)	T5 ³⁾ (100°C)	T4 ³⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	40°C ¹⁾	80°C	95°C	130°C	195°C	280°C	-
	60°C ¹⁾²⁾	-	95°C	130°C	195°C	280°C	-
	65°C	-	-	130°C	195°C	280°C	-
	70°C	-	-	130°C	-	-	-
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	40°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
	60°C ¹⁾²⁾	-	95°C	130°C	195°C	290°C	450°C
	70°C	-	-	130°C	195°C	290°C	450°C

注：¹⁾ 产品认证代码为 ND, NH, NF, N4 且配备 OVP 或 TRM 时，温度组别 T5、T6 的产品最高环境温度减 2K。

²⁾ 带压力表接口的产品，T5 对应的 Ta(max) 为 55°C。

³⁾ 对于压力表接口与 Prowirl 传感器直接安装的产品，最高介质温度在温度组别 T6 和 T5 时为 40°C，T4 时为 90°C。当介质温度高于 90°C 时，DPC21 压力传感器与 Prowirl F/R/O 传

传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

分离型转换器 型号: NJA, N4A, N5A, NKA, NDA, NHA, NFA	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline Prowirl C/D/F/R/O 200	40°C ¹⁾	60°C ¹⁾	75°C

注：¹⁾ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K。

分离型传感器 型号: NJA, N4A, N5A, NKA, NDA, NHA, NFA	FT _{med}						
	温度组别 (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	280°C	280°C
Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	70°C ¹⁾	-	95°C	130°C	195°C	280°C	280°C
	85°C	-	-	130°C	195°C	280°C	280°C
Proline	55°C ¹⁾	80°C	95°C	130°C	195°C	290°C	450°C
Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	70°C ¹⁾	-	95°C	130°C	195°C	290°C	450°C
	85°C	-	-	130°C	195°C	290°C	450°C

注：¹⁾ 带压力表接口的产品，T6对应的Ta(max)为40°C，T5对应的Ta(max)为55°C。

²⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40°C，T4时为90°C。当介质温度高于90°C时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

一体型 型号: NFB, N4B, NDB, NHB	T _{med}						
	温度组别 (T*)	T6 ⁵⁾ (85°C)	T5 ⁵⁾ (100°C)	T4 ⁵⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280°C	35°C ¹⁾²⁾	80°C	95°C	130°C	195°C	280°C	280°C
	50°C ¹⁾²⁾	-	95°C	130°C	195°C	280°C	280°C
	60°C	-	-	130°C	195°C	280°C	280°C
	65°C	-	-	130°C	195°C	280°C ³⁾	280°C ³⁾
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450°C	70°C	-	-	130°C	195°C ³⁾	280°C ³⁾	280°C ³⁾
	35°C ¹⁾²⁾	80°C	95°C	130°C	195°C	290°C	450°C
	50°C ¹⁾²⁾	-	95°C	130°C	195°C	290°C	450°C
	65°C	-	-	130°C	195°C	290°C	450°C
	70°C			130°C	195°C ⁴⁾	290°C ⁴⁾	450°C ⁴⁾

注：¹⁾ 产品配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K；

²⁾ PFS电路Pi = 0.85W时，产品最高环境温度减5K；

³⁾ 对于最高介质温度T_m ≤ 280°C产品，列出的最高环境温度仅在PFS电路Pi = 0.7W时适用；

⁴⁾ 列出的最高环境温度仅在PFS电路Pi = 0.85W时适用。

⁵⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40℃，T4时为90℃。当介质温度高于90℃时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

分离型转换器 型号:	Ta(max)		
	T6 (85℃)	T5 (100℃)	T4 (135℃)
NFB, N4B, NDB, NHB	(85℃)	(100℃)	(135℃)
Proline	35℃ ¹⁾	50℃ ¹⁾	70℃
Prowirl C/D/F/R/O 200	40℃ ¹⁾²⁾	60℃ ¹⁾²⁾	75℃ ²⁾

注：¹⁾ 产品配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K；

²⁾ 列出的最高环境温度仅在PFS电路Pi = 0.85W时适用。

分离型传感器 型号:	T _{med}						
	温度组别 (T*)	T6 ²⁾ (85℃)	T5 ²⁾ (100℃)	T4 ²⁾ (135℃)	T3 (200℃)	T2 (300℃)	T1 (450℃)
NFB, N4B, NDB, NHB	Ta(max)						
Proline	55℃ ¹⁾	80℃	95℃	130℃	195℃	280℃	280℃
Prowirl C/D/F/R/O 200 with max. T _{med} = 280℃	70℃ ¹⁾	-	95℃	130℃	195℃	280℃	280℃
	85℃	-	-	130℃	195℃	280℃	280℃
Proline	55℃ ¹⁾	80℃	95℃	130℃	195℃	290℃	450℃
Prowirl C/D/F/R/O 200 with max. T _{med} = 450℃	70℃ ¹⁾	-	95℃	130℃	195℃	290℃	450℃
	85℃	-	-	130℃	195℃	290℃	450℃

注：¹⁾ 带压力表接口的产品，T6对应的Ta(max)为40℃，T5对应的Ta(max)为55℃。

²⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40℃，T4时为90℃。当介质温度高于90℃时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

一体型 型号:	T _{med}						
	温度组别 (T*)	T6 ³⁾ (85℃)	T5 ³⁾ (100℃)	T4 ³⁾ (135℃)	T3 (200℃)	T2 (300℃)	T1 (450℃)
NJB, N5B, NKB	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280℃	40℃	80℃	95℃	130℃	195℃	280℃	280℃
	55℃	-	95℃	130℃	195℃	280℃	280℃
	65℃	-	-	130℃	195℃	280℃ ¹⁾	280℃ ¹⁾
	70℃	-	-	130℃	195℃ ¹⁾	280℃ ¹⁾	280℃ ¹⁾
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450℃	40℃	80℃	95℃	130℃	195℃	290℃	450℃
	55℃	-	95℃	130℃	195℃	290℃	450℃
	65℃	-	-	130℃	195℃	290℃	450℃
	70℃	-	-	130℃	195℃ ²⁾	290℃ ²⁾	450℃ ²⁾

注：¹⁾ 最高介质温度T_m ≤ 280℃的产品，列出的最高环境温度仅在PFS电路Pi = 0.7W时适用；

²⁾ 列出的最高环境温度仅在PFS电路Pi = 0.85W时适用。

³ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40℃，T4时为90℃。当介质温度高于90℃时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

分离型转换器 型号: NJB, N5B, NKB	Ta(max)		
	T6 (85℃)	T5 (100℃)	T4 (135℃)
Proline Prowirl C/D/F/R/O 200	40℃	55℃	70℃
			75℃ ¹⁾

注：¹⁾ 列出的最高环境温度仅在PFS电路Pmax = 0.85W时适用。

分离型传感器 型号: NJB, N5B, NKB	T _{med}						
	温度组别 (T*)	T6 ²⁾ (85℃)	T5 ²⁾ (100℃)	T4 ²⁾ (135℃)	T3 (200℃)	T2 (300℃)	T1 (450℃)
	Ta(max)						
Proline	55℃ ¹⁾	80℃	95℃	130℃	195℃	280℃	280℃
Prowirl C/D/F/R/O 200 with max. T _{med} = 280℃	70℃ ¹⁾	-	95℃	130℃	195℃	280℃	280℃
	85℃	-	-	130℃	195℃	280℃	280℃
Proline	55℃ ¹⁾	80℃	95℃	130℃	195℃	290℃	450℃
Prowirl C/D/F/R/O 200 with max. T _{med} = 450℃	70℃ ¹⁾	-	95℃	130℃	195℃	290℃	450℃
	85℃	-	-	130℃	195℃	290℃	450℃

注：¹⁾ 带压力表接口的产品，T6对应的Ta(max)为40℃，T5对应的Ta(max)为55℃。

²⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40℃，T4时为90℃。当介质温度高于90℃时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

一体型 型号: NJC, N4C, N5C, NKC, NDC, NHC, NFC	T _{med}						
	温度组别 (T*)	T6 ⁴⁾ (85℃)	T5 ⁴⁾ (100℃)	T4 ⁴⁾ (135℃)	T3 (200℃)	T2 (300℃)	T1 (450℃)
	Ta(max)						
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 280℃	40℃ ¹⁾	80℃	95℃	130℃	195℃	280℃	280℃
	55℃ ¹⁾	-	95℃	130℃	195℃	280℃	280℃
	60℃	-	-	130℃	195℃	280℃	280℃
	65℃	-	-	130℃	195℃	280℃ ²⁾	280℃ ²⁾
Proline Prowirl C/D/F/R/O 200 with max. T _{med} = 450℃	70℃	-	-	130℃	130℃	130℃	130℃
	40℃ ¹⁾	80℃	95℃	130℃	195℃	290℃	450℃
	55℃ ¹⁾	-	95℃	130℃	195℃	290℃	450℃
	65℃	-	-	130℃	195℃	290℃	450℃
	70℃			130℃	195℃ ³⁾	290℃ ³⁾	450℃ ³⁾

注：¹⁾ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K；

2² 对于最高介质温度 $T_m \leq 280^\circ\text{C}$ 的产品，电源/输出电路端子3和4不使用（ $P_i = 0\text{W}$ 或 $P_{\text{max}} = 0\text{W}$ ）时的最高环境温度为 65°C ；

3² 电源/输出电路端子3和4不使用（ $P_i = 0\text{W}$ 或 $P_{\text{max}} = 0\text{W}$ ）时的最高环境温度为 70°C 。

4² 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为 40°C ，T4时为 90°C 。当介质温度高于 90°C 时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

分离型转换器 型号: NJC, N4C, N5C, NKC, NDC, NHC, NFC	Ta(max)		
	T6 (85°C)	T5 (100°C)	T4 (135°C)
Proline	$40^\circ\text{C}^{1)}$	$55^\circ\text{C}^{1)}$	70°C
Prowirl C/D/F/R/O 200			$75^\circ\text{C}^{2)}$

注：1¹ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K；

2² 列出的最高环境温度在电源/输出电路端子3和4不使用（ $P_i = 0\text{W}$ 或 $P_{\text{max}} = 0\text{W}$ ）时适用。

分离型传感器 型号: NJC, N4C, N5C, NKC, NDC, NHC, NFC	T _{med}						
	温度组别 (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	$55^\circ\text{C}^{1)}$	80°C	95°C	130°C	195°C	280°C	280°C
Prowirl C/D/F/R/O 200	$70^\circ\text{C}^{1)}$	-	95°C	130°C	195°C	280°C	280°C
with max. T _{med} = 280°C	85°C	-	-	130°C	195°C	280°C	280°C
Proline	$55^\circ\text{C}^{1)}$	80°C	95°C	130°C	195°C	290°C	450°C
Prowirl C/D/F/R/O 200	$70^\circ\text{C}^{1)}$	-	95°C	130°C	195°C	290°C	450°C
with max. T _{med} = 450°C	85°C	-	-	130°C	195°C	290°C	450°C

注：1¹ 带压力表接口的产品，T6对应的Ta(max)为 40°C ，T5对应的Ta(max)为 55°C 。

2² 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为 40°C ，T4时为 90°C 。当介质温度高于 90°C 时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

一体型 型号: NJD, N4D, N5D, NKD, NDD, NHD, NFD	T _{med}						
	温度组别 (T*)	T6 ²⁾ (85°C)	T5 ²⁾ (100°C)	T4 ²⁾ (135°C)	T3 (200°C)	T2 (300°C)	T1 (450°C)
	Ta(max)						
Proline	$35^\circ\text{C}^{1)}$	80°C	95°C	130°C	195°C	280°C	280°C
Prowirl C/D/F/R/O 200	$50^\circ\text{C}^{1)}$	-	95°C	130°C	195°C	280°C	280°C
with max. T _{med} = 280°C	55°C	-	-	-	195°C	280°C	280°C
	60°C	-	-	-	195°C	195°C	195°C

Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 450^{\circ}\text{C}$	35 $^{\circ}\text{C}^{1)}$	80 $^{\circ}\text{C}$	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	50 $^{\circ}\text{C}^{1)}$	-	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	55 $^{\circ}\text{C}$	-	-	-	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	60 $^{\circ}\text{C}$	-	-	-	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	65 $^{\circ}\text{C}$	-	-	-	-	290 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$

注：¹⁾ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K。

²⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40 $^{\circ}\text{C}$ ，T4时为90 $^{\circ}\text{C}$ 。当介质温度高于90 $^{\circ}\text{C}$ 时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

分离型转换器 型号： NJD, N4D, N5D, NKD, NDD, NHD, NFD	$T_a(\text{max})$		
	T6 (85 $^{\circ}\text{C}$)	T5 (100 $^{\circ}\text{C}$)	T4 (135 $^{\circ}\text{C}$)
Proline Prowirl C/D/F/R/O 200	35 $^{\circ}\text{C}^{1)}$	50 $^{\circ}\text{C}^{1)}$	65 $^{\circ}\text{C}$

注：¹⁾ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K。

分离型传感器 型号： NJD, N4D, N5D, NKD, NDD, NHD, NFD	T_{med}						
	温度组别 (T^*)	T6 ²⁾ (85 $^{\circ}\text{C}$)	T5 ²⁾ (100 $^{\circ}\text{C}$)	T4 ²⁾ (135 $^{\circ}\text{C}$)	T3 (200 $^{\circ}\text{C}$)	T2 (300 $^{\circ}\text{C}$)	T1 (450 $^{\circ}\text{C}$)
	$T_a(\text{max})$						
Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 280^{\circ}\text{C}$	55 $^{\circ}\text{C}^{1)}$	80 $^{\circ}\text{C}$	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 450^{\circ}\text{C}$	70 $^{\circ}\text{C}^{1)}$	-	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
	85 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 450^{\circ}\text{C}$	55 $^{\circ}\text{C}^{1)}$	80 $^{\circ}\text{C}$	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	70 $^{\circ}\text{C}^{1)}$	-	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	85 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$

注：¹⁾ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K。

²⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40 $^{\circ}\text{C}$ ，T4时为90 $^{\circ}\text{C}$ 。当介质温度高于90 $^{\circ}\text{C}$ 时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

一体型 型号： NFE, NJE, N4E, N5E, NKE, NFG, NJG, N4G, N5G, NKG, NDE, NHE, NDG, NHG	T_{med}						
	温度组别 (T^*)	T6 ⁵⁾ (85 $^{\circ}\text{C}$)	T5 ⁵⁾ (100 $^{\circ}\text{C}$)	T4 ⁵⁾ (135 $^{\circ}\text{C}$)	T3 (200 $^{\circ}\text{C}$)	T2 (300 $^{\circ}\text{C}$)	T1 (450 $^{\circ}\text{C}$)
	$T_a(\text{max})$						

Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 280^{\circ}\text{C}$	40 $^{\circ}\text{C}^{1)}$	80 $^{\circ}\text{C}$	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
	50 $^{\circ}\text{C}^{1)2)}$	-	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
	60 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
	65 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}^{3)}$	280 $^{\circ}\text{C}^{3)}$
	70 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}^{4)}$	280 $^{\circ}\text{C}^{4)}$	280 $^{\circ}\text{C}^{4)}$
Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 450^{\circ}\text{C}$	40 $^{\circ}\text{C}^{1)}$	80 $^{\circ}\text{C}$	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	50 $^{\circ}\text{C}^{1)2)}$	-	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	65 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	70 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}^{4)}$	290 $^{\circ}\text{C}^{4)}$	450 $^{\circ}\text{C}^{4)}$

注：¹⁾ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K；

²⁾ PFS电路不使用时最高环境温度为60 $^{\circ}\text{C}$ ；

³⁾ PFS电路不使用时最高环境温度为65 $^{\circ}\text{C}$ ；

⁴⁾ PFS电路不使用时最高环境温度为70 $^{\circ}\text{C}$ 。

⁵⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40 $^{\circ}\text{C}$ ，T4时为90 $^{\circ}\text{C}$ 。当介质温度高于90 $^{\circ}\text{C}$ 时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

分离型转换器 型号： NFE, NJE, N4E, N5E, NKE, NFG, NJG, N4G, N5G, NKG, NDE, NHE, NDG, NHG	Ta(max)		
	T6 (85 $^{\circ}\text{C}$)	T5 (100 $^{\circ}\text{C}$)	T4 (135 $^{\circ}\text{C}$)
Proline Prowirl C/D/F/R/O 200	40 $^{\circ}\text{C}^{1)}$	55 $^{\circ}\text{C}^{1)}$	70 $^{\circ}\text{C}$ 75 $^{\circ}\text{C}^{2)}$

注：¹⁾ 产品认证代码为NF、N4、ND或NH且配备OVP或TRM时，温度组别T5、T6的产品最高环境温度减2K；

²⁾ PFS电路不使用时最高环境温度为75 $^{\circ}\text{C}$ 。

分离型传感器 型号： NFE, NJE, N4E, N5E, NKE, NFG, NJG, N4G, N5G, NKG, NDE, NHE, NDG, NHG	T_{med}						
	温度组别 (T*)	T6 ²⁾ (85 $^{\circ}\text{C}$)	T5 ²⁾ (100 $^{\circ}\text{C}$)	T4 ²⁾ (135 $^{\circ}\text{C}$)	T3 (200 $^{\circ}\text{C}$)	T2 (300 $^{\circ}\text{C}$)	T1 (450 $^{\circ}\text{C}$)
	Ta(max)						
Proline	55 $^{\circ}\text{C}^{1)}$	80 $^{\circ}\text{C}$	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 280^{\circ}\text{C}$	70 $^{\circ}\text{C}^{1)}$	-	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
	85 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$	280 $^{\circ}\text{C}$
Proline Prowirl C/D/F/R/O 200 with max. $T_{med} = 450^{\circ}\text{C}$	55 $^{\circ}\text{C}^{1)}$	80 $^{\circ}\text{C}$	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	70 $^{\circ}\text{C}^{1)}$	-	95 $^{\circ}\text{C}$	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$
	85 $^{\circ}\text{C}$	-	-	130 $^{\circ}\text{C}$	195 $^{\circ}\text{C}$	290 $^{\circ}\text{C}$	450 $^{\circ}\text{C}$

注：¹⁾ 带压力表接口的产品，T6对应的Ta(max)为40 $^{\circ}\text{C}$ ，T5对应的Ta(max)为55 $^{\circ}\text{C}$ 。

²⁾ 对于压力表接口与Prowirl传感器直接安装的产品，最高介质温度在温度组别T6和T5时为40 $^{\circ}\text{C}$ ，T4时为90 $^{\circ}\text{C}$ 。当介质温度高于90 $^{\circ}\text{C}$ 时，DPC21压力传感器与Prowirl F/R/O传感器之间的安装应配备隔离管，该隔离管的长度不得小于50cm。

6、产品必须与已通过防爆认证的关联设备配套共同组成本安防爆系统方可使用于爆炸性气体环境或可燃性粉尘环境。其系统接线必须同时遵守本产品 and 所配关联设备的使用说明书要求，接线端子不得接错。

6.1 产品本安参数：

代码 dde	端子	U_i	I_i	P_i	C_i	L_i
N4A NFA	1, 2	30V	300mA	1W	5nF	0mH
	3, 4	-	-	-	-	-
	5, 6	-	-	-	-	-
N4B NFB	1, 2	30V	300mA	1W	5nF	0mH
	3, 4	30V	300mA	1W	6nF	0mH
	5, 6	-	-	-	-	-
N4C NFC	1, 2	30V	300mA	1W	30nF	0mH
	3, 4	30V	300mA	1W	30nF	0mH
	5, 6	-	-	-	-	-
N4D NFD	1, 2	30V	300mA	1W	5nF	0mH
	3, 4	30V	300mA	1W	6nF	0mH
	5, 6	30V	300mA	1W	5nF	0mH
NFE N4E NFG N4G	1, 2	17.5V ¹⁾	550mA ¹⁾	5.5W ¹⁾	5nF ¹⁾	10 μ H ¹⁾
		30V	300mA	1.2W	5nF	10 μ H
	3, 4	30V	300mA	1W	6nF	0mH
	5, 6	-	-	-	-	-

注：¹⁾ 表示此组安全参数满足FISCO总线设备的要求。

代码 dde	端子	U_i	I_i	P_i	C_i	L_i
NDA NHA	1, 2	35V	-	1W	5nF	0mH
	3, 4	-	-	-	-	-
	5, 6	-	-	-	-	-
NDB NHB	1, 2	35V	-	1W	5nF	0mH
	3, 4	35V	-	1W	6nF	0mH
	5, 6	-	-	-	-	-

NDC NHC	1, 2	30V	-	1W	30nF	0mH
	3, 4	30V	-	1W	30nF	0mH
	5, 6	-	-	-	-	-
NDD NHD	1, 2	35V	-	1W	5nF	0mH
	3, 4	35V	-	1W	6nF	0mH
	5, 6	35V	-	1W	5nF	0mH
NDE NHE	1, 2	17.5V ¹⁾	- ¹⁾	- ¹⁾	5nF ¹⁾	10 μ H ¹⁾
		32V	300mA	-	5nF	10 μ H
NDG	3, 4	35V	300mA	1W	6nF	0mH
NHG	5, 6	-	-	-	-	-

注：¹⁾ 表示此组安全参数满足FISCO总线设备的要求。

7、当 $dd = NJ、N5$ 或 NK 时，产品电气参数如下：

代码 dde	端子	U_{nom}	U_{max}	P_{max}
NJA N5A N4A NKA	1, 2	35Vdc	250Vac	-
	3, 4	-	-	-
	5, 6	-	-	-
NJB N5B N4B NKB	1, 2	35Vdc	250Vac	-
	3, 4	35Vdc	250Vac	1W ¹⁾
	5, 6	-	-	-
NJC N5C N4C NKC	1, 2	30Vdc	250Vac	-
	3, 4	30Vdc	250Vac	-
	5, 6	-	-	-
NJD N5D N4D NKD	1, 2	35Vdc	250Vac	-
	3, 4	35Vdc	250Vac	1W ¹⁾
	5, 6	35Vdc	250Vac	-

NJE N5E	1, 2	32Vdc	250Vac	0.88W
N4E NJG	3, 4	35Vdc	250Vac	1W ¹⁾
N4G N5G NKE NKG	5, 6	-	-	-

注：¹⁾ 此电路由内阻760.5Ω保护；由此可确定 P_{max} 。

8、产品型号规格中 $f = L$ 或 M 时，电气参数如下：

8.1 连接FHX50或其它经认证的本安显示仪表

$$U_o = 7.3V \quad I_o = 157mA \quad P_o = 362mW \quad C_o = 388nF \quad L_o = 149\mu H$$

$$C_c \leq 125nF \quad L_c \leq 149\mu H$$

8.2 当本安接口使用

$$U_o = 7.3V \quad I_o = 327mA \quad P_o = 800mW; \quad U_i = 7.3V \quad C_i = 0nF \quad L_i = 0mH$$

8.3 当非本安接口使用

$$U_N = 6.5V$$

9、压力传感器DPC21的本安参数如下：

$$U_o = 4.1V \quad I_o = 450mA \quad P_o = 150mW \quad C_o = 99.3\mu F \quad L_o = 84\mu H$$

10、产品可外接经防爆认证的接口设备，本安输出参数如下：

$$U_o = 7.3V \quad I_o = 100mA \quad P_o = 160mW \quad C_i = 0nF \quad L_i = 0mH$$

11、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。

12、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。

13、产品的安装、使用和维护应同时遵守产品使用说明书、GB/T 3836.13-2021 “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 3836.16-2022 “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”、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
二〇二三年十一月七日