



EXPLOSION PROTECTION

CERTIFICATE OF CONFORMITY

Cert No. GYJ24.1250X

Manufacturer	WIKA Alexander Wiegand SE & Co.KG (Address: Alexander-Wiegand-Strasse 30, 63911 Klingenberg, Germany)
Product	Process transmitter
Model	IPT-2* Series / CPT-2* Series
Ex marking	Ex db ia IIC T1...T6 Ga/Gb Ex db ia IIC T1...T6 Gb
Product standard	/
Drawing number	GE3127-04, GE3127-09, GE3127-51, GE3127-61

The product was found to comply with the following standard(s):

GB/T 3836.1-2021, GB/T 3836.2-2021, GB/T 3836.4-2021

Valid until: 2029.10.11

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.

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 2024.10.12

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



(GYJ24.1250X)

(Attachment I)

Attachment I to GYJ24.1250X

(translation)

Model IPT-2* Series / CPT-2* Series Process transmitter, manufactured by WIKA Alexander Wiegand SE & Co.KG have been certified and accords with following standards:

GB/T3836.1-2021 Explosive atmospheres-Part 1: Equipment-General requirements

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

GB/T3836.4-2021 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety "i"

The Ex marking is Ex db ia IIC T1...T6 Ga/Gb Ex db ia IIC T1...T6 Gb.

Its certificate number is GYJ24.1250X.

Type approved in this certificate is shown as follows:

IPT-2 **a-b** D/4 **c-d e f g h-i-j*******_***_*****_***_** or

CPT-2 **a-b** D/4 **c-d e f g h-i-j*******_***_*****_***_**, in which

a indicates Electrical approval I, which could be D.

b indicates Electrical approval II, which could be D.

c indicates Zone, which could be B(Ex db ia IIC T1...T6 Ga/Gb) or A(Ex db ia IIC T1...T6 Gb).

d indicates Housing material, which could be A(Aluminum single chamber),
D(Aluminum double chamber), V(Stainless steel cast single chamber)
or W(Stainless steel cast double chamber).

e indicates Case version, which could be I, A or S.

f indicates Cable material and length, which could be Z, A, B, C, D, E, G, H, I, J or K.

g indicates Digital Display, which could be B or C.

h indicates Additional electronic, which could be Z or B.

i indicates Assembly design, which could be A(4...20 mA, 2-wire),

H(4...20 mA, 2-wire, HART), S(4...20 mA, 2-wire, HART with SIL qualification),

P(PROFIBUS PA), F(FOUNDATION-Fieldbus),

R(secondary electronic for electr. differential pressure) or

T(secondary electronic for electr. differential pressure with SIL).

j indicates Electrical connection, which could be 1, 2, 7, R or S.

The code * represents information unrelated to explosion-proof performance., including Unit, Pressure type, Measuring range, Process connection, Sealing, Wetted parts(confirmed explosion-proof compliance of the material), Accuracy, etc.

1. Special Conditions for Safe Use

The suffix "X" placed after the certificate indicates that the product is subject to special conditions for safe use specified as follows:

1.1 The maximum ambient temperature range of product is $-50^{\circ}\text{C}\sim+60^{\circ}\text{C}$.

The relationship between the ambient temperature of the product, the medium temperature and the temperature group is as follows:

EPL Ga/Gb instruments:

Temperature class	Ambient temperature on the electronics (zone 1)	Product temperature range (sensor, zone 0)
T6	-50°C to $+60^{\circ}\text{C}$	-20°C to $+23^{\circ}\text{C}$
T1...T5	-50°C to $+60^{\circ}\text{C}$	-20°C to $+60^{\circ}\text{C}$

For applications requiring instruments of EPL Ga/Gb the process pressure of the media must be between 80...110 kPa. If the IPT-20/21-*D/4*..., CPT-20/21-*D/4*... are operated at temperatures higher than those specified in the above table, make sure by means of appropriate measures that there is no danger of ignition from the hot surfaces.

EPL Gb instrument, IPT-20/21 with High-temperature version:

Temperature class	Ambient temperature on the electronics (zone 1)	Product temperature range (sensor, zone 0)
T6	-50°C to $+60^{\circ}\text{C}$	-50°C to $+39^{\circ}\text{C}$
T5	-50°C to $+60^{\circ}\text{C}$	-50°C to $+100^{\circ}\text{C}$
T4	-50°C to $+60^{\circ}\text{C}$	-50°C to $+135^{\circ}\text{C}$
T1...T3	-50°C to $+60^{\circ}\text{C}$	-50°C to $+200^{\circ}\text{C}$

EPL Gb instrument, IPT-20/version with standard process temperature:

Temperature class	Ambient temperature on the electronics (zone 1)	Product temperature range (sensor, zone 0)
T6	-50°C to $+60^{\circ}\text{C}$	-50°C to $+39^{\circ}\text{C}$
T5	-50°C to $+60^{\circ}\text{C}$	-50°C to $+85^{\circ}\text{C}$
T4	-50°C to $+60^{\circ}\text{C}$	-50°C to $+105^{\circ}\text{C}$
T1...T3	-50°C to $+60^{\circ}\text{C}$	-50°C to $+120^{\circ}\text{C}$

EPL Gb instrument, IPT-20/version with extended process temperature:

Temperature class	Ambient temperature on the electronics (zone 1)	Product temperature range (sensor, zone 0)
T6	-50°C to +60°C	-50°C to +39°C
T5	-50°C to +60°C	-50°C to +85°C
T4	-50°C to +60°C	-50°C to +120°C
T1...T3	-50°C to +60°C	-50°C to +150°C

If the IPT-20/21-*D/4*..., CPT-20/21-*D/4*... are operated at temperatures higher than those specified in the above table, make sure by means of appropriate measures that there is no danger of ignition from the hot surfaces.

- 1.2 For EPL Ga/Gb applications, at the metallic parts of process transmitter type CPT- 20/21-*D/4*...and IPT-20/21-*D/4*... made of light metal there is a danger of ignition by impact or friction.Observe manual of the manufacturer.
- 1.3 For EPL Ga/Gb applications and at risks by pendulum or vibration the respective parts of the process transmitter type CPT-20/21-*D/4*... and IPT-20/21-*D/4*... have to be secured effectively against these dangers. Observe manual of the manufacturer.
- 1.4 For EPL Ga/Gb applications of the process transmitter type CPT-20/21-*D/4*... and IPT-20/21- *D/4*... the medium tangent materials have to be resistant to the media. Observe manual of the manufacturer.
- 1.5 For EPL Ga/Gb applications of the process transmitter type CPT-20/21-*D/4*... and IPT-20/21- *D/4*-the medium tangent materials have to be resistant to the media. Observe manual of the manufacturer.
- 1.6 For the execution with separate housing of the process transmitter type CPT-20/21-*D/4*... and IPT-20/21-*D/4*... * potential equalization has to be exist in the complete course of the erection of the connecting cable.
- 1.7 The flameproof housing of this equipment must be provided with cable entries and filler plugs resp. conduits which are certified according to IEC 60079-0 and IEC 60079-1. The connection cables, the cable entries and filler plugs resp. the conduits have to be suitable for the lowest ambient temperature.
- 1.8 For information on the dimensions of the flameproof joints contact the manufacturer.

2. Conditions for Safe Use

2.1 Electrical ratings:

IPT-20/21-*D/4*-...., **CPT-20/21-*D/4*-....** with integrated electronics **A** (4...20 mA),
H (4...20mA/ HART), **S** (4...20 mA/HART with SIL-Qualification), version
 with single chamber housing **A, V**

Circuit/terminals	Electrical data
Power supply and signal circuit (Terminals 1[+], 2[-])	U = 9.6...35VDC Um = 253 VAC I ≤ 3.5~22.5mA (with superimposed HART signal)
Indicating and adjustment circuit (Terminals 5,6,7,8)	For connection to DI-PT-E or IPT-20/21 and CPT-20/21 (with integrated electronics R or T)
Circuit for the display and adjustment (Spring contacts)	For connection to the display and adjustment module DI-PT-A

IPT-20/21-*D/4*-...., **CPT-20/21-*D/4*-....** with integrated electronics **A** (4...20 mA),
H (4...20mA/ HART), **S** (4...20 mA/HART with SIL-Qualification),
 version with double chamber housing **D, W**

Circuit/terminals	Electrical data
Power supply and signal circuit (Terminals 1[+], 2[-])	U = 9.6...35VDC Um = 253 VAC
Indicating and adjustment circuit (Terminals 5,6,7,8)	For connection to DI-PT-E or IPT-20/21 and CPT-20/21 (with integrated electronics R or T)
Circuit for the display and adjustment (Spring contacts)	For connection to the display and adjustment module DI-PT-A

IPT-20/21-*D/4*-...., **CPT-20/21-*D/4*-....** with integrated electronics **P** (Profibus PA),
F (Foundation Fieldbus), version with single chamber housing **A, V**

Circuit/terminals	Electrical data
Power supply and signal circuit (Terminals 1[+], 2[-])	U = 9.6...32VDC Um = 253 VAC
Indicating and adjustment circuit (Terminals 5,6,7,8)	For connection to DI-PT-E or IPT-20/21 and CPT-20/21 (with integrated electronics R)
Circuit for the display and adjustment (Spring contacts)	For connection to the display and adjustment module DI-PT-A

**IPT-20/21-*D/4*-..., CPT-20/21-*D/4*-... with integrated electronics P (Profibus PA),
F (Foundation Fieldbus), version with double chamber housing D, W**

Circuit/terminals	Electrical data
Power supply and signal circuit (Terminals 1[+], 2[-])	U = 9.6...32VDC Um = 253 VAC
Indicating and adjustment circuit (Terminals 5,6,7,8)	For connection to DI-PT-E or IPT-20/21 and CPT-20/21 (with integrated electronics R)
Circuit for the display and adjustment (Spring contacts)	For connection to the display and adjustment module DI-PT-A

**IPT-20/21-*D/4*-..., CPT-20/21-*D/4*-... with integrated electronics R or T,
for differential pressure measurement**

Circuit/terminals	Electrical data
Power supply and signal circuit (Terminals 5,6,7,8)	For connection to IPT-20/21 and CPT-20/21 (with integrated electronics H, A, P, F)

**IPT-20/21-*D/4*-..., CPT-20/21-*D/4*-... version with separate cable outlet
(all electronics)**

Circuit/terminals	Electrical data
Circuit between sensor unit and external electronics (terminal 1- yellow, terminal 2-white, terminal 3-red, terminal 4-black)	With IPT-20/21-*D/4*-..., CPT-20/21-*D/4*-... in the version with fix mounted cable on the sensor unit and external electronics, the supplied cable between the external housing and the sensor unit must not exceed a length of 180 m.

2.2 The external earth connection shall be connected reliably.

2.3 When the metallic parts material is aluminum alloy, make sure there is no harmful gas, at the installation site, that will corrode/react with aluminum alloy.

2.4 The equipment shall be used in the positions as specified in the instruction manual.

2.5 As the flameproof product, suitable certified cable glands or blanking plugs for unused Holes (M20x1.5 or ½-14 NPT) approved by ExTL according to GB/T3836.1-2021 and GB/T3836.2-2021 with Ex marking “Ex db IIC Gb” shall be used and correctly installed.

2.6 Obey the rule “DO NOT OPEN WHEN ENERGIZED”.

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

2.8 For installation, use and maintenance of the product, the end user shall observe the instruction manual and the following standards:

GB/T3836.13-2021 Explosive atmospheres- Part 13:Equipment repair, overhaul and reclamation .

GB/T3836.15-2017 Explosive atmospheres- Part 15:Electrical installations design, selection and erection.

GB/T3836.16-2022 Explosive atmospheres- Part 16:Electrical installations inspection and maintenance.

GB/T3836.18-2024 Explosive atmospheres-Part 18:Intrinsically safe electrical systems

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

3. Manufacturer's Responsibility

3.1 Conditions for safe use, as specified above, should be included in the documentation the user is provided with.

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

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