IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx CCVE 25.0005X** Page 1 of 3 Certificate history:

Status: **Current** Issue No: 0

Date of Issue: 2025-12-24

Applicant: **IG Metran, JSC**
15, Novogradsky Avenue,
Chelyabinsk 454103
Russian Federation

Equipment: **Pressure Transmitter Metran-150 models 150CD, 150CG, 150TG, 150TA**

Optional accessory:

Type of Protection: **flameproof enclosures "d', intrinsic safety "i", dust ignition protection by enclosure "t"**

Marking: Option E7:

Ex db IIC T6…T4 Gb

Ex tb IIIC T85 °C…T135 °C Db

Option I7:

Ex ia IIC T5…T4 Ga

Ex ia IIIC T_{200}100 °C…T_{200}135 °C Da

Option K7:

Ex db IIC T6…T4 Gb

Ex tb IIIC T85 °C…T135 °C Db

or

Ex ia IIC T5…T4 Ga

Ex ia IIIC T_{200}100 °C…T_{200}135 °C Da

IP66/IP68

Approved for issue on behalf of the IECEx Certification Body: **Elena Sovetova**

Position: **Deputy Head of CB NANIO CCVE**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
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Certificate issued by:

NANIO CCVE
Zavod ECOMASH, VUGI Settlement
Lyubertsy, Moscow region
140004
Russian Federation

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Certificate No.: **IECEx CCVE 25.0005X**

Date of issue: 2025-12-24 Issue No: 0

Manufacturer: **IG Metran, JSC**
15, Novogradsky Avenue,
Chelyabinsk 454103
Russian Federation

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

RU/CCVE/ExTR25.0005/00

Quality Assessment Report:

RU/CCVE/QAR25.0003/00

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Pressure Transmitter Metran-150 models 150CD, 150CG, 150TG, 150TA consists of an electronic transmitter and a sensor module.

The electronic transmitter is housed within a housing made of 316 stainless steel (type CF-8M according to ASTM A473) or ASTM B85 SG100B or AK9M2, AK12 aluminum alloy. The electronic transmitter housing is closed with two threaded covers. One of the covers can have a viewing window (if equipped with an LCD display), sealed with compound and held in place by a metal bracket. The housing is divided into a connection compartment containing a terminal block and a main compartment containing the printed circuit boards.

The sensor module is made of stainless steel and houses a board of the analog-digital converter and sensing elements. Connection to the electronic transmitter is via feedthrough contacts.The casing of the electronic pressure transmitter converter can be made of aluminum alloy and coated with polyurethane or polyester powder paint.

The interior of the module is filled with compound. The pressure is transferred to the sensitive element through a membrane made of stainless steel (can be gold-plated), or alloy C-276, or tantalum, or titanium.

For options I7, K7:

Ui≤30 V, Ii≤120 mA, Pi ≤ 0,9 W, Li=70 µH, Ci=0,01 µF

For options E7, K7:

4-20 mA output signal with a digital signal based on the HART protocol

Supply voltage: 12...42 VDC Power consumption, no more than: 0.9 VA

The dependence of the temperature class on the ambient temperature and the process temperature is shown in Table 1 of the Annex 1 of this certificate. For the detailed designation of the Pressure Transmitter Metran-150 models 150CD, 150CG, 150TG, 150TA refer to the Annex 1 of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:
− connection of external electrical circuits to pressure transmitter must be carried out through Ex cable glands that have valid IECEx certificates of conformity with the corresponding type of explosion protection and safety characteristics that do not impair the safety characteristics of the pressure transmitter;

− unused openings in the housings of the pressure transmitter must be closed with plugs that have a valid IECEx certificate of conformity with corresponding type of explosion protection and characteristics that do not impair the safety characteristics of the pressure transmitter. When installed in the pressure transmitter plugs must be secured against self-unscrewing. The use of plugs with a threaded adapter is not permitted;

− explosion proof connections of pressure transmitter cannot be repaired;

- the dependence of the temperature class on the ambient temperature and the process temperature is shown in the table 1 of Annex 1 of this certificate;

− pressure transmiters must be powered through intrinsically safe barriers (intrinsically safe power supplies) that have a valid IECEx certificate of conformity;

− both total inductance and total capacitance of the intrinsically safe circuits of the transmitter, connected to intrinsically safe equipment, and connecting cables, must not exceed the maximum values specified on the intrinsically safe barrier or intrinsically safe power supply from the hazardous area side;

− when installing a basic terminal block in transmitters, the insulation strength test with an effective 500 V AC voltage is not performed (the protection is triggered). This must be taken into account for proper installation;

- it is necessary to protect the casings of the electronic transmitter converters from friction or mechanical impacts that can cause sparking.

Annex:

Annex 1 to IECEx CCVE 25.0005X.pdf

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Annex 1 to IECEx CCVE 25.0005X **Issue No. 0**

The dependence of the temperature class on the ambient temperature and the process temperature is shown in Table 1.

Table 1

Option	Ex marking	Temperature class / Surface temperature	Maximum rated ambient temperature range (°C)	Temperature of measured process medium (°C)
E7, K7	Ex db IIC T6…T4 Gb Ex tb IIIC T85 °C…T135 °C Db	T4 (135 °C)	- 60…+85	- 60…+120
		T5 (100 °C)	- 60…+85	- 60…+85
		T6 (85°C)	- 60…+70	- 60…+70
I7, K7	Ex ia IIC T5…T4 Ga Ex ia IIIC T_{200}100 °C…T_{200}135 °C Da	T4 (135 °C)	- 60…+70	- 60…+120
		T5 (100 °C)	- 60…+70	- 60…+85

Designation of the Pressure Transmitter Metran-150 models 150CD and 150CG:

Metran-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

37	38	39	40	41	42	43	44	45	46

1	150CD – differential pressure transmitter; 150CG – gauge pressure transmitter
2 - 4	Options that are not related to explosion protection
5	O-ring material (1 – HO-68-1 rubber; 2 – glass-filled fluoroplastic (PTFE); 3 – fluorosilicone rubber; 4 – graphite-filled fluoroplastic (PTFE))
6, 7	Options that are not related to explosion protection
8	Output signal (A – 4-20 mA with a digital signal based on HART)
9	HART protocol version (HR7 – HART protocol version 7)
10	Options that are not related to explosion protection
11	Indication (M5 – built-in LCD)

12	For special applications (I7, E7, K7 – explosion protected design)
13 - 28	Options that are not related to explosion protection
29	Electronic transmitter housing material (HS – stainless steel)
30, 31	Options that do not affect explosion protection
32	Ambient temperature (LT – ambient temperature from -55 °C, BR6 – ambient temperature from -60 °C)
33 - 46	Options that are not related to explosion protection

Designation of the Pressure Transmitter Metran-150 models 150TA ana 150TG:

Metran-	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

37	38	39	40	41	42	43	44

1	150TG – gauge pressure transmitter; 150TA – absolute pressure transmitter
2 - 5	Options that are not related to explosion protection
6	Output signal (A – 4-20 mA with digital signal based on the HART protocol)
7	HART protocol version (HR7 – HART protocol version 7)
8	Options that are not related to explosion protection
9	Indication (M5 – built-in LCD)
10	For special applications (I7, E7, K7 – explosion protected design)
11 - 26	Options that are not related to explosion protection
27	Electronic transmitter housing material (HS – stainless steel)
28, 29	Options that are not related to explosion protection
30	Ambient temperature (LT – ambient temperature from -55 °C, BR6 – ambient temperature from -60 °C)
31 - 44	Options that are not related to explosion protection