



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 INE 21.0064X** Page 1 of 3 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2022-02-02
Applicant: **Comhas S.r.l.**
Via Matteotti, 66
Cinisello Balsamo (MI) I-20092
Italy
Equipment: **Pressure and differential pressure switches, gauges and transmitters Series AT-10******
Optional accessory:
Type of Protection: **"db" "tb"**
Marking: Ex db IIC T5 or T6 Gb
Ex tb IIIC T75°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Thierry HOUÉIX

Position:

Ex Certification Officer

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

INERIS
Institut National de l'Environnement Industriel et des Risques
BP n2 / Parc Technologique ALATA
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France



controlling risks |
for sustainable development |



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Manufacturer: **Comhas S.r.l.**
Via Matteotti, 66
Cinisello Balsamo (MI) I-20092
Italy

Additional
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 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[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 Reports:

[FR/INE/ExTR21.0052/00](#)

[IT/EUT/ExTR19.0015/01](#)

Quality Assessment Report:

[FR/INE/QAR22.0001/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Pressure and Differential Pressure switches, gauges, temperature switches, transmitters, COMHAS Series AT-10**** are instruments for pressure control protected by Ex db/tb enclosure for IIC gas atmospheres and IIIC dust atmospheres.

The Ex equipment is composed of a flameproof / dust tight enclosure with different dimensions (eventually with extensions), contains instruments that may be connected to the external pressure sources (process connection) by two types of breathing devices, LD or STD.

These breathing devices can be installed on the pressure ports that are connected with the internal instrument, or coupled to the internal volume of enclosure, in order to maintain the internal pressure value within the limits of IEC 60079-1 standard in presence of failure of containment system.

The instruments installed inside the enclosure are pressure switches, differential pressure switches, gauges and transmitters of series 2000, 1900, 616KD, 616KD-LR, 668B/D, ADPS, BYDS, EDPS, 607D, MS2, MSX, MSXP, DM-2000, DM-2100, , MS, 1800, DH3, DHC, 3000MR/ MRS, 605, 607 and A3000, manufactured by Dwyer Instruments Inc.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- For the risk of propagating brush discharges for application in explosive dust atmosphere, the user shall read the instructions.
- The dimensions of flameproof joints are different from the values specified in the tables of the IEC 60079-1 standard. For any repair on flameproof joints, contact the manufacturer for information.

Annex:

[IECEX INE 21.0064X-00_Annex.pdf](#)



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PARAMETERS RELATING TO THE SAFETY

Supply voltage : up to 240 V ac/dc

Supply current : up to 500 mA

Maximum dissipated power : 6W

In the table below are detailed the maximum process pressure values, applicable to a measure ports, in relation to the breathing elements type installed and their configurations:

Simplified scheme of breathing devices								Maximum pressure value with	
								Only one pressure port connected	Both pressure ports connected
Breathing device defined configurations	VS0	Pressure port 1 breathing device	STD	Pressure port 2 breathing device	STD	Enclosure breathing device	None	10 kPa	10 kPa
	VL0		LD		LD		None	10 kPa	10 kPa
	VS1		STD		STD		STD	20 kPa	15 kPa
	VS2		STD		STD		LD	40 kPa	20 kPa
	VL1		LD		LD		LD	20 kPa	15 kPa

MARKING

Marking has to be readable and indelible; it has to include the following indications:

- Comhas S.r.l.
- Cinisello Balsamo (MI), Italy
- AT-10... (*)
- IECEx INE 21.0064X
- (Serial number)
- Ex db IIC T6 or T5 Gb (**)
- Ex tb IIIC T75 °C Db
- Tamb. : -60°C to +50°C or -60°C to +60°C (**)
- Cable entry: see instructions
- WARNING: DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT

(*) The characteristics of Ex equipment AT-10** series are codified according to the scheme detailed below in Model Reference.

(**) T6 for Tamb. : -60°C to +50°C
 T5 for Tamb. : -60°C to +60°C
 T75°C for Tamb. : -60°C to +50°C or -60°C to +60°C



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Model Reference :

[a]	[b]	[c]	[d]	-	[e] or [e1]	-	[f]	[g]	[h]	[i]
□□	□□□	□	□	-	*	-	□	□□□□	□□	*

[a] Equipment Type	AT	Explosion proof version	
[b] Enclosure Dimension	100	Type GUB-100 enclosure	
	101	Type GUB-101 enclosure	
	102	Type GUB-102 enclosure	
[c] Enclosure Extension	N	Without extension	
	P	Enclosure with extension	
[d] Materials	A	Enclosure in Aluminum alloy	
	S	Enclosure in stainless steel	
[e] Instrument identification code (with no influences on type of protection)	*	Instrument code (manufactured by Dwyer Instruments Inc.) these instruments types shall not be connected to a process that contains a flammable fluid or explosive atmosphere	
[e1] Instrument identification code (with influences on type of protection)	*	20XX-XXX BUNA IC	
	*	182X-XX BUNA the instruments listed above can be connected to a process that contains a flammable fluid or explosive atmosphere	
[f] Top cover type	B	Blind top cover	
	W	Top cover with cemented glass window	
[g] Breathing device	Identification	1	Brass made breathing device
		2	Stainless steel made breathing device
	Configuration	VS0	Two identical STD breathing valves installed at measure pressure ports with no additional breathing device, connected to the enclosure internal volume
		VL0	Two identical LD breathing valves installed at measure pressure ports with no additional breathing device, connected to the enclosure internal volume
		VS1	Two identical STD breathing valves installed at measure pressure ports with an additional breathing device type STD, connected to the enclosure internal volume
		VS2	Two identical STD breathing valves installed at measure pressure ports with an additional breathing device type LD, connected to the enclosure internal volume
		VL1	Two identical LD breathing valves installed at measure pressure ports with an additional breathing device type LD, connected to the enclosure internal volume
the maximum process pressures permitted for these configurations are detailed as safety parameters			
[h] Cable entry	12	½" NPT ANSI/ASME B1.20.1	
	34	¾" NPT ANSI/ASME B1.20.1	
	20	ISO M20x1.5mm	
	25	ISO M25x1.5mm	
[i] Other options	*	Digits describing other options of the equipment, not related to the safety of the equipment	

ROUTINE EXAMINATIONS AND TESTS

In accordance with clause 16.2 of the IEC 60079-1 standard, the Ex equipment having a blind threaded cover (identified by the B letter, as indicated in [f] field of the key code) is exempted of routine test due to the fact that it has undergone a static type test at 4 times the reference pressure under 48 bar

In accordance with clause 16.6 of the IEC 60079-1 standard, for the Ex equipment having a threaded cover with cemented window (identified by the W letter, as indicated in [f] field of the key code), that has undergone a static type test at 3 times the reference pressure under 36 bar, the routine overpressure test could be replaced by a batch test according the criteria specified in this clause. The samples of the production batch must have successfully passed an overpressure test, during at least 10 seconds under 18 bar.

In accordance with clause G.4.1 of the IEC 60079-1 standard, the instruments listed in the [e1] field of the key code, that are the only suitable for use with a flammable process fluids, shall be submitted to the routine overpressure test, at a pressure value of 0.6 Bar, for at least 2 min.