



Safety note
«Pressure and Differential Pressure switches, gauges and transmitters, COMHAS Series AT-10**»**

Rev 2

Via Matteotti 66 – 20092 – Cinisello Balsamo (MI) - Italy

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**Pressure and Differential Pressure switches,
gauges and transmitters, COMHAS Series
AT-10******

**Safety Note according to
ATEX Directive 2014/34/EU
EN 60079-0:2018
EN 60079-1:2014
EN 60079-31:2014**

**IECEx Scheme
IEC 60079-0:2017
IEC 60079-1:2014
IEC 60079-31:2013**

Revision: 2

Date: 07/01/2022

Prepared: F.Meyer

Approved: R.Hassan



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GENERAL DESCRIPTION

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.

COMHAS Series AT-10**** are suitable to be installed in hazardous area and complies with the requirements of:

- Directive ATEX 2014/34/EU
- IECEx Scheme

And applicable standards IEC/EN 60079-0, IEC/EN 60079-1 and IEC/EN 60079-31 as apparatus of group II, Category 2GD types of protection Ex db IIC T5, T6 Gb and Ex tb IIIC T85°C Db IP66, ambient temperature -60° / +60°C (or +50°C)

ATEX Marking:



II 2G Ex db IIC T5, T6 Gb



II 2D Ex tb IIIC T75°C Db IP66

IECEx Marking:

Ex db IIC T5, T6 Gb

Ex tb IIIC T75°C Db IP66

T6 with Ambient Temperature -60°C to +50°C

T5 with Ambient Temperature -60°C to +60°C



TECHNICAL CHARACTERISTICS

Electrical data

Maximum Nominal power: 6 W

Maximum Nominal current consumption : 0,5 A

Maximum Nominal Voltage: 230 V

Ambient temperature range: -60°C/+60°C (for T5) and -60°C/+50°C (for T6)

Max Process temperature ≤ Max ambient temperature

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Equipment Codification

[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 identification code starting letter	
	*	Instrument code (manufactured by Dwyer Instruments Inc.)	
	-	Instrument identification code ending letter	
	*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
		VLO*	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	

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Ports 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	15kPa



MARKING

Example of Marking Label:

COMHAS
 Comhas srl - Cinisello Balsamo (MI) - Italy
 Tel. +39 02/61298551 R.A. - www.comhas.com

CE 0080

INERIS 21ATEX0033X:
 II 2G Ex db IIC T5,T6 Gb -60°C<Ta<+50°C(T6)
 -60°C<Ta<+60°C(T5)
II 2D Ex Tb IIC T75°C Db
IECEX INE 21.0064X:
 Ex db IIC T5,T6 Gb -60°C<Ta<+50°C(T6)
 -60°C<Ta<+60°C(T5)
 Ex tb IIC T75°C Db

WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IN PRESENT

Model: _____
 S.N.: _____
 Year: _____
 Case amb. temp.: _____
 Press. Elements Temp. Limits: _____
 Range: _____
 IP: _____
 Max Static Press.: _____

 Power Supply: _____
 Electrical Rating: _____

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Comhas AT series, are marked as required by:

- ATEX Directive 2014/34/UE:

Model : AT10X

SERIAL NUMBER : E.g. XXXXXX

CE 0080



II 2G Ex db IIC T5, T6 Gb



II 2D Ex tb IIIC T75°C Db IP66

INERIS 21ATEX0033X

<i>0080</i>	=	Notified Body identification number for quality production surveillance (INERIS)
<i>II</i>	=	group II
<i>2G</i>	=	category 2G, equipment for surface with the presence of gas
<i>2D</i>	=	category 2D, equipment for surface with the presence of dust
<i>Ex db</i>	=	type of protection
<i>IIC</i>	=	Group of gas IIC
<i>Gb</i>	=	EPL (gas suitable for zone 1 and 2)
<i>Ex tb</i>	=	type of protection
<i>IIIC</i>	=	Group of dust IIIC
<i>Db</i>	=	EPL (dust suitable for zone 21 and 22)
INERIS 21ATEX0033X	=	EU Type Certificate

Relation between hazardous areas, categories and EPL

<i>Hazardous area</i>	<i>ATEX categories 2014/34/EU</i>	<i>EPL</i>
ZONE 0	1G	Ga
ZONE 1	2G	Gb or Ga
ZONE 2	3G	Gc or Gb or Ga

- IECEx Marking:

Ex db IIC T5, T6 Gb

Ex tb IIIC T75°C Db IP66

IECEx INE 21.0064X

<i>Ex db</i>	=	type of protection
<i>IIC</i>	=	Group of gas IIC
<i>Gb</i>	=	EPL (gas suitable for zone 1 and 2)
<i>Ex tb</i>	=	type of protection
<i>IIIC</i>	=	Group of dust IIIC
<i>Db</i>	=	EPL (dust suitable for zone 21 and 22)
IECEx INE 21.0064X	=	IECEx Certificate

Warning label :

WARNING – DO NOT OPEN WHEN ENERGIZED

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SAFETY INSTRUCTIONS FOR INSTALLATION IN HAZARDOUS AREAS



Before installing, carefully read the instruction manual provided with the AT10**** Series



The system can be used in environments with explosive gas group IIC and dust group IIIIC , Ambient temperature = -60°C / +60°C (for T5) and -60°C/+50°C (for T6).

The **AT10**** series** shall be installed and maintained according to the applicable standards regarding electrical installations in hazardous area (EN 60079-14 and EN 60079-17 or other national standard).

After connection to the ground check PE cable to avoid rotation or twist of the cable.



The maximum fluid temperature at pneumatic connection shall be + 60°C and not greater than maximum ambient temperature.



Do not open when an explosive atmosphere is present.

This apparatus must be installed and put into operation in accordance with the provisions and regulations. Shall not be liable for damage caused by non-observance of the instructions and inappropriate use.



It is forbidden any technical modification. Any repair activity is not permitted without manufacturer Authorization. For any repair contact the manufacturer.

Periodic maintenance of the system in accordance with the instruction manual have to be performed regularly.

Additional residual risks present are:

- System maintenance not performed according to the manufacturer
- improperly Use and / or incorrect way of the system.



The user shall perform a regular cleaning of the enclosure to avoid any dust layer on the equipment. Clean the equipment with a dumb cloth to avoid electrostatic charge risk.

COMHAS is not responsible any damage caused by misuse and / or abuse of the system.

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EU DECLARATION OF CONFORMITY

DICHIARAZIONE DI CONFORMITA' UE
EU DECLARATION OF CONFORMITY

We

Comhas.srl
Via Matteotti 66,
Cinisello Balsamo 20092 (MI) – ITALY

declare under our sole responsibility that the product

Pressure and Differential Pressure switches, gauges and transmitters, COMHAS Series AT-10****

to which this declaration refers, is in conformity with

Directive 2014/34/EU (ATEX)

The conformity are under observance of the following standards :

ATEX

EN 60079-0 : 2018

EN 60079-1 : 2014

EN 60079-31 : 2014

ATEX marking

CE 0080 Ex II 2G Ex db IIC T5, T6 Gb

Ex II 2D Ex tb IIIC T75°C Db IP66

Tamb: -60°C ÷ +60°C (T5)

Tamb: -60°C ÷ +50°C (T6)

ATEX EU type certificate
INERIS 21ATEX0033X

ATEX/Q notify body: **INERIS (0080)**

Cinisello Balsamo, 01/02/2022

Comhas S.r.l.
Riccardo Hassan
Managing Director

Prepared: F.Meyer

Approved: R.Hassan



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DICHIARAZIONE DI CONFORMITA' UE
EU DECLARATION OF CONFORMITY

Dichiariamo con la presente che i prodotti forniti e sopra citati sono conformi alle seguenti direttive comunitarie e con la relativa legislazione nazionale di recepimento. (Non applicabile per Modello AT-100/101/102S-2000 Magnehelic)

We declare that products supplied as per above mentioned order conform with following European Community directives and with the relevant National laws (does not apply for Models AT-100/101/102S-2000 Magnehelic)

Directive 2011/65/EU Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment

Directive 2014/35/EU Low Voltage Directive (LVD)

IEC 61010-1:2010 Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements

Directive 2014/30/EU Electromagnetic Compatibility (EMC)

EN 61326 1:2013 Electrical Equipment for Measurement, Control and Laboratory Use – EMC Requirements

IEC 61000-4-2:2008 Electromagnetic Compatibility (EMC) - Part 4-2: Testing and Measurement Techniques - Electrostatic Discharge Immunity Test

IEC 61000-4-3:2006+A1:2007+A2:2010 Electromagnetic Compatibility (EMC) - Part 4-3: Testing and Measurement Techniques - Radiated, Radio-Frequency, Electromagnetic Field Immunity Test

IEC 61000-4-4:2012 Electromagnetic Compatibility (EMC) - Part 4-4: Testing and Measurement Techniques - Electrical Fast Transient/Burst Immunity Test

IEC 61000-4-5:2014 Electromagnetic Compatibility (EMC) - Part 4-5: Testing and Measurement Techniques - Surge Immunity Test

IEC 61000-4-6:2013 Electromagnetic Compatibility (EMC) - Part 4-6: Testing and Measurement Techniques - Immunity to Conducted Disturbances, Induced By Radio-Frequency Fields

Comhas srl
Il Direttore Generale
Managing Director
Riccardo Hassan

Data/Date 01/02/2022

Prepared: F.Meyer

Approved: R.Hassan