

OPERATING INSTRUCTIONS

Explosionproof and Flameproof Pressure Transducers / Transmitters for use with Liquids and Gases

AST4600 • AST46HA • AST46PT

Explosionproof and Flameproof transducers comply with the following hazardous location standards:

Canada, USA:

CSA C22.2 No. 25-17, CSA C22.2 No. 30:20 (R07/20), CSA C22.2 No. 94.2-15 Second Edition, C22.2 No. 142-M1987 (Reaffirmed 2009), ANSI/UL 508-2013 Seventeenth Edition, ANSI/UL 1203-2022 Fifth Edition, ANSI/UL 50E-15 Second Edition, CAN/CSA-C22.2 No. 60079-0:15 Update No. 1 — April 2018, CAN/CSA-C22.2 No. 60079-1:16, CAN/CSA-C22.2 No. 60079-31:15, ANSI/UL 60079-0-2013 Sixth Edition (R2017), ANSI/UL 60079-1-2015 Seventh Edition, ANSI/UL 60079-31-2015 Second Edition, ANSI/ISA 12.27.01-2003, FM 3600 (January 2018), FM 3615 (January 2018)

ATEX, UKCA:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-31:2014



IECEX:

IEC 60079-0:2017 Edition: 7.0, IEC 60079-1:2014-06 Edition 7.0, IEC 60079-31:2013 Edition 2

Canada and USA Markings:

Class I, Div. 1, Groups A, B, C, D T5
 Class II, Division 1, Groups E, F and G T100°C*
 Enclosure Type 4
 Ex db IIC T5 Gb
 Ex tb IIIC T100 °C Db*
 Class I, Zone 1, AEx db IIC T5 Gb
 Zone 21, AEx tb IIIC T100°C Db*
 Single Seal
 Ambient Temperature: -40 °C to +85 °C
 Process Temperature: ≤ +125 °C

ATEX and UKCA Markings:

 II 2G Ex db IIC T5 Gb
 II 2D Ex tb IIC T100 °C Db *

Ambient Temp -40 to 80 °C
 Process Temp -40 to 125 °C

IECEX:

Ex db IIC T5 Gb
 Ex tb IIIC T100°C Db *
 Tamb = -40 °C to +85 °C
 Tproc= -40 °C to +125 °C



* G and V pressure reference units are not suitable for Dust Atmospheres. Refer to data sheet.

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Important Safety Instructions

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Consignes de sécurité importantes

C'est le symbole d'alerte de sécurité. Il est utilisé pour vous avertir des risques potentiels de blessures. Respectez tous les messages de sécurité qui suivent ce symbole pour éviter toute blessure ou la mort.



DANGER indique une situation dangereuse qui, si elle n'est pas évitée, entraînera la mort ou des blessures graves.



WARNING indique une situation dangereuse qui, si elle n'est pas évitée, peut entraîner la mort ou des blessures graves.



CAUTION utilisé avec le symbole d'alerte de sécurité, indique un danger situation qui, si elle n'est pas évitée, pourrait entraîner des blessures mineures ou modérées.



ELECTRICAL INSTALLATION (RACCORDEMENT ELECTRIQUE)

⚠WARNING EXPLOSION HAZARD

Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous. This equipment must be powered by a Non-hazardous live source in accordance with CAN/CSA-C22.2 No. 61010-1-04 eg. limited energy source, or a Class 2 Source.

(AVERTISSEMENT) Risque d'explosion

Déconnecter l'appareil uniquement après avoir coupé l'alimentation électrique ou avoir vérifié qu'il n'est pas installé en zone dangereuse. Cet équipement doit être alimenté par une source directe non dangereuse conformément aux normes CAN/CSA-C22.2 No. 61010-1-04 par exemple en source d'énergie limitée ou en source Classe 2.

FIELD SERVICE (SERVICE DE TERRAIN)

The pressure transmitters have no field serviceable parts. For technical issues or questions, please contact the factory

Les transmetteurs de pression ne contiennent aucune pièce réparable sur le terrain. Pour des problèmes techniques ou des questions, s'il vous plaît contacter l'usine

⚠WARNING The enclosure is manufactured from light metal. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.

(AVERTISSEMENT) Le boîtier est fabriqué en métal léger. Dans de rares cas, des sources d'inflammation due à des étincelles d'impact et de friction pourraient survenir. Ceci doit être considéré lors de l'installation.

⚠WARNING Potential Electrostatic Discharge Hazard - clean the surface with a damp cloth.

(AVERTISSEMENT) Décharge potentiel électrostatique Hazard - nettoyer la surface avec un chiffon humide.

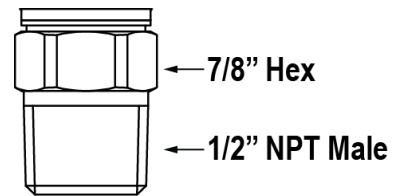
Special Conditions for Safe Use

- i. The product label indicates that the process temperature range is -40°C to $+125^{\circ}\text{C}$, taking this into account, the user/installer shall take precautions that ensure that the operating service temperature of the overall pressure transducer assembly is between -40°C to 92°C .
- ii. Under certain extreme circumstances, exposed plastic and unearthened metal parts of the enclosure may store an ignition-capable level of electrostatic charge. Therefore, the user/installer shall implement precautions to prevent the build-up of electrostatic charge, e.g. locate the equipment where a charge-generating mechanism (such as wind-blown dust) is unlikely to be present and clean with a damp cloth.
- iii. The integral conductors shall be suitably mechanically protected and terminated in a suitable terminal or junction facility.
- iv. It is the user's responsibility to ensure that the earth continuity of the equipment is maintained via the mounting arrangement.
- v. The enclosure is manufactured from light metal. In rare cases, ignition sources due to impact and friction sparks could occur and that shall be considered during installation.
- vi. The external pressure on potted flying leads shall not exceed 30 bar maximum.

Process Connection Installation

For threaded installations, use the 7/8" hex above the thread of the process connection to install the process. Do not use the body / housing for installation.

Maximum working pressure for the lowest pressure sensors 0.34MPa (50 psi) and maximum working pressure for the highest pressure sensors 137.9MPa (20,000 PSI) -- SINGLE SEAL.



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Wiring

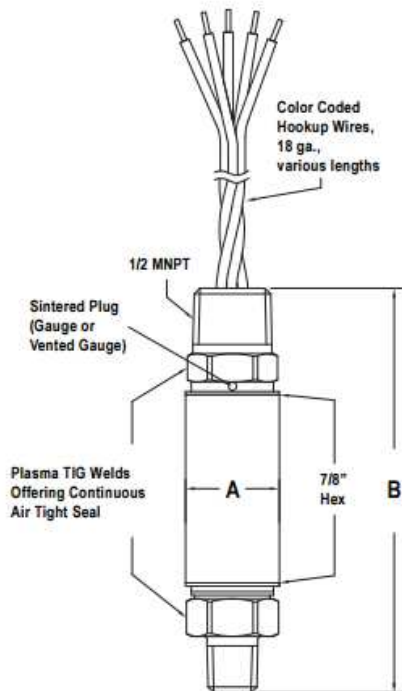
AST4600, AST46HA

Output	Red	Black	White	Green	For U.S. installations, sensor case ground (green wire) must be bonded to ground according to Article 501 & 505 of the NEC.
Voltage	+V Supply	-V Supply	Output	Case Ground	
4-20mA	+V Supply	-V Supply	Not Used	Case Ground	

AST46PT

Output	Power Connections		Output Connections		Green	Length	For U.S. installations, sensor case ground (green wire) must be bonded to ground according to Article 501 & 505 of the NEC.
	Red	Black	White	Blue			
Voltage	+V Supply	-V Supply	Pressure	Temp	Case Ground	4.3"	
4-20mA	+Pressure	-Pressure	-Temperature	+Temp	Case Ground	4.8"	

Outline Drawing, Explosionproof with Metal Conduit and Cable



Model Series	Body Diameter	Overall Length
	"A"	"B"
AST4600	0.875"	3.64"
AST46HA	1"	4.3"
AST46PT (4-20mA)	1"	4.8"
AST46PT (Voltage)	1"	4.3"

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MANUFACTURING PLANT

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Rev 03
2024-06-07