



INSTALLATION | WIRING GUIDE

AST Pressure Sensors

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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 utilisée 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.



Special Conditions for Safe Use

- i. To ensure proper equipment installation, precaution must be taken with respect to the process temperature; operating service temperature of the pressure transducer is -40°C to 92°C.
- ii. Under certain extreme circumstances, exposed plastic and unearthed metal parts of the enclosure may store an ignition capable level of electrostatic charge. Therefore, the user/installer shall implement precautions to prevent the buildup 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 30bar maximum.

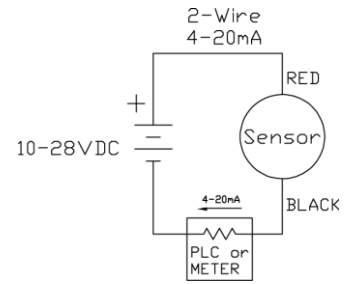
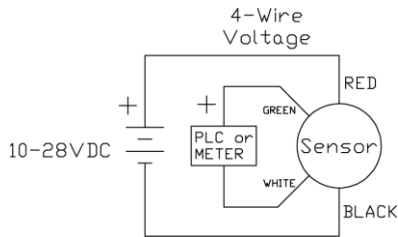
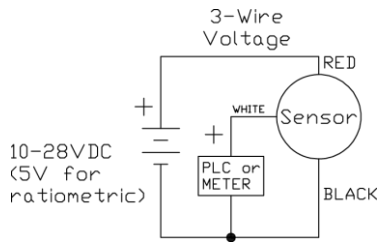
Conditions spéciales pour une utilisation sûre

- i. Pour assurer une installation correcte de l'équipement, des précautions doivent être prises en ce qui concerne la température du processus; La température de service du capteur de pression est comprise entre -40°C et 92°C.
- ii. Dans certaines circonstances extrêmes, le plastique exposé et les parties métalliques non mises à la terre de l'enceinte peuvent stocker un niveau de charge électrostatique pouvant provoquer un allumage. Par conséquent, l'utilisateur / l'installateur doit mettre en œuvre des précautions pour empêcher l'accumulation de charge électrostatique, par exemple localiser l'équipement dans un endroit où il est peu probable qu'un mécanisme générateur de charge (tel que de la poussière emportée par le vent) soit présent et le nettoyer avec un chiffon humide.
- iii. Les conducteurs intégrés doivent être protégés mécaniquement de manière appropriée et raccordés à une borne ou à une installation de jonction appropriée.
- iv. Il incombe à l'utilisateur de s'assurer que la continuité de la terre de l'équipement est maintenue via le montage.
- v. Le boîtier est fabriqué à partir de métal léger. Dans de rares cas, des sources d'inflammation dues à l'impact et aux étincelles de friction peuvent se produire et doivent être prises en compte lors de l'installation.
- vi. La pression externe sur les câbles volants en pot ne doit pas dépasser 30bar maximum.

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AST Pressure Sensors

Wiring Schematics

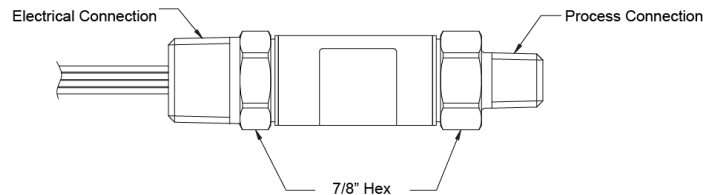


Output	mV	Voltage		
		0.5-4.5V ratiometric	1-5V, 1-6V, 0-5V	0-10V, 1-10V
Supply Voltage	5VDC typ., 10VDC max.	5VDC ± 0.5V	10-28VDC	15-28VDC
Output Load	>1 MΩ	>10 KΩ	>10 KΩ	>10 KΩ
Operating Temperature	-40 to 105°C	-40 to 85°C	-40 to 85°C	-40 to 85°C

Output	4-20mA
Supply Voltage	10-28VDC
Output Load	0-800Ω
Operating Temperature	-40 to 85°C

Mechanical Installation

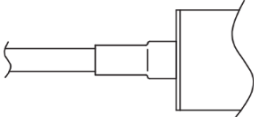
Use the hex flats closest to the process connection for installation into the process. For conduit connections, hold the product at the hex closest to the conduit connection.

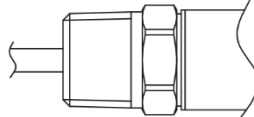


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AST Pressure Sensors

Cable / Hookup Wire Connections

Standard Cable	
	
AST Electrical Connection Option	"A, B, C, D"
Gauge Wire	24 AWG

Conduit with Cable	
	
"L, M, N, P"	
24 AWG	

Output Type	Green	Black	Red	White
mV & 4-Wire Voltage	+S	GND	+V	-S
3 Wire Voltage	N/C	GND	+V	S
4-20mA (2 wire loop powered)	N/C	-V	+V	N/C

CSA Certified Sensors

Output Type	Green	Black	Red	White
3 Wire Voltage	Case	GND	+V	S
4-20mA (2 wire loop powered)	Case	-V	+V	N/C

NOTICE FOR NON-INCENDIVE SENSORS INSTALLED IN [CLASS I, DIV 2, GROUPS A, B, C, D]

- Suitable for use in [Class I, Division 2, Groups A, B, C And D] Hazardous Locations, or Non Hazardous Locations only.

⚠️WARNING Explosion Hazard

- Do not disconnect equipment while the circuit is live or unless the area is known to be free of ignitable concentrations.

⚠️WARNING Explosion Hazard

- Substitution of any component may impair suitability for [Class I, Division 2]

NOTICE FOR INTRINSICALLY SAFE SENSORS

- Refer to the Intrinsically Safe Installation Manual for barrier installation information

AVIS POUR LES CAPTEURS NON INCENDIVE INSTALLÉS DANS [CLASS I, DIV 2, GROUPES A, B, C, D]

- Convient pour une utilisation dans les zones dangereuses ou les zones non dangereuses de la [Classe I, Division 2, Groupes A, B, C et D].}

⚠️WARNING Danger d'explosion

- Ne débranchez pas l'équipement tant que le circuit est sous tension ou s'il est avéré que la zone est exempte de concentrations inflammables.

⚠️WARNING Danger d'explosion

- Substitution of any component may impair suitability for [Class I, Division 2]

AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS

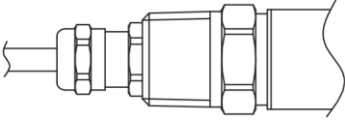
- Reportez-vous au manuel d'installation à sécurité intrinsèque pour obtenir des informations sur l'installation de la barrière.

+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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AST Pressure Sensors

Submersible Cable / Hookup Wire Connections

UL/CSA Conduit with Cable	
	
AST Electrical Connection Option	"N, P, X*"
Gauge Wire	22 AWG

**see data sheet for special options*

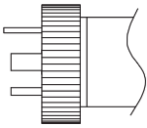
Output Type	Green	Black	Red	White
Voltage	Case	GND	+V Supply	S
4-20mA (2 wire loop powered)	Case	-V Supply	+V Supply	N/C
NOTICE FOR INTRINSICALLY SAFE and NON-INCENDIVE SENSORS - Refer to the Intrinsically Safe and Non-Incendive Installation Manuals for barrier installation information.				
AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS ET NON INCENDIVE - Consultez les manuels d'installation à sécurité intrinsèque et non incendiaire pour obtenir des informations sur l'installation d'une barrière.				

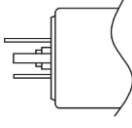
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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AST Pressure Sensors

DIN

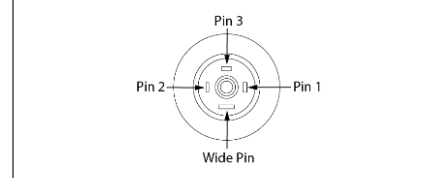
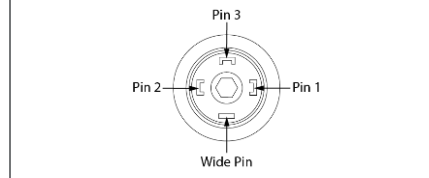
DIN 43650A 18.0mm	
	
AST Electrical Connection Option	"I"
Mates w/	931 970-100 [conduit] or equivalent
AST Mating Connector Part #	A09171

Mini-DIN 43650C 8.0mm	
	
"E"	
933 023-100	
A01980	

NOTICE FOR INTRINSICALLY SAFE and NON-INCENDIVE SENSORS - Refer to the Intrinsically Safe and Non-Incendive Installation Manuals for barrier installation information.

AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS ET NON INCENDIVE - Consultez les manuels d'installation à sécurité intrinsèque et non incendiaire pour obtenir des informations sur l'installation d'une barrière.

Output Type	Pin 1	Pin 2	Pin 3	Wide Pin	Pin 1	Pin 2	Pin 3	Wide Pin
mV & 4-Wire Voltage	+S	GND	+V	-S	-S	GND	+V	+S
3 Wire Voltage	+V	GND	S	N/C	S	GND	+V	N/C
4-20mA (2 wire loop powered)	+V	-V	N/C	N/C	N/C	-V	+V	N/C



CSA Certified Sensors

Output Type	Pin 1	Pin 2	Pin 3	Wide Pin	Pin 1	Pin 2	Pin 3	Wide Pin
3 Wire Voltage	+V	GND	S	Case	S	GND	+V	Case
4-20mA (2 wire loop powered)	+V	GND	Case	N/C	N/C	GND	+V	Case

NOTICE FOR NON-INCENDIVE SENSORS INSTALLED IN [CLASS I, DIV 2, GROUPS A, B, C, D]

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WARNING Danger d'explosion

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AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS

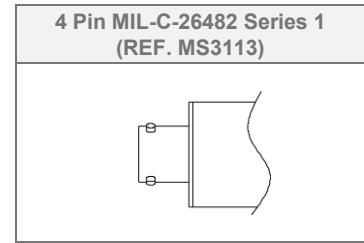
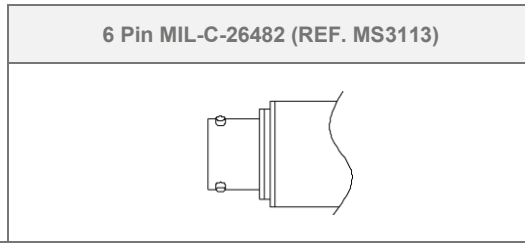
- Reportez-vous au manuel d'installation à sécurité intrinsèque pour obtenir des informations sur l'installation de la barrière.

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AST Pressure Sensors

+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

Bendix™



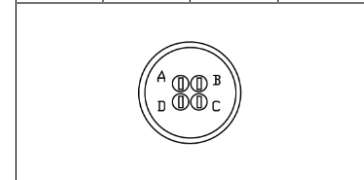
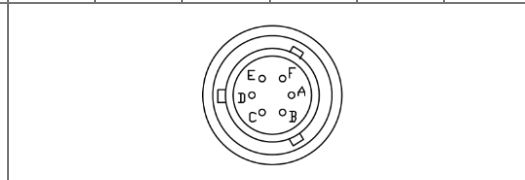
AST Electrical Connection Option	"R"
Mates w/	PT06A-10-6S
AST Mating Connector Part #	A04235

AST Electrical Connection Option	"S"
Mates w/	PT06A-8-4S
AST Mating Connector Part #	N/A

NOTICE FOR INTRINSICALLY SAFE SENSORS - Refer to the Intrinsicly Safe Installation Manual for barrier installation information
AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS - Consultez le Manuel d'installation à sécurité intrinsèque pour obtenir des informations sur l'installation de la barrière.

Output Type	Pin A	Pin B	Pin C	Pin D	Pin E	Pin F (SS only)
mV & 4-Wire Voltage	+V	+S	-S	GND	N/C	Case
3 Wire Voltage	+V	S	N/C	GND	N/C	Case
4-20mA (2 wire loop powered)	+V	GND	N/C	N/C	N/C	Case

Pin A	Pin B	Pin C	Pin D
+V	+S	-S	GND
+V	S	N/C	GND
+V	GND	N/C	N/C



+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

Option Code - For Special Wiring Requests						
	Pin A	Pin B	Pin C	Pin D	Pin E	Pin F (-SS only)
000	+V	+S	-S	GND	N/C	Case
115	+S	-S	GND	+V	N/C	Case
164	+S	-S	+V	GND	N/C	Case
292	+V	GND	+S	-S	N/C	Case

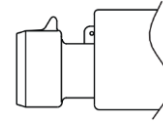
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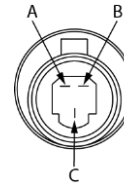
AST Pressure Sensors

Packard™ Metri-Pack

Delphi: Packard™ Metri-Pack 150



AST Electrical Connection Option	"F"
Mates w/	Packard™ Delphi 1206 5287
AST Mating Connector Part #	A04391
NOTICE FOR INTRINSICALLY SAFE and NON-INCENDIVE SENSORS - Refer to the Intrinsically Safe and Non-Incendive Installation Manuals for barrier installation information.	
AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS ET NON INCENDIVE - Consultez les manuels d'installation à sécurité intrinsèque et non incendiaire pour obtenir des informations sur l'installation d'une barrière.	



Output Type	Pin A	Pin B	Pin C
mV & 4-Wire Voltage	N/A	N/A	N/A
3 Wire Voltage	GND	+V	S
4-20mA (2 wire loop powered)	-V	+V	N/C

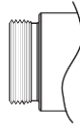
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

INSTALLATION | WIRING GUIDE

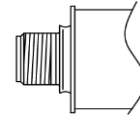
AST Pressure Sensors

Minifast™ M12x1

Minifast™



M12x1



AST Electrical Connection Option	"4"
----------------------------------	-----

"Y"

NOTICE FOR INTRINSICALLY SAFE and NON-INCENDIVE SENSORS - Refer to the Intrinsically Safe and Non-Incendive Installation Manuals for barrier installation information.

AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS ET NON INCENDIVE - Consultez les manuels d'installation à sécurité intrinsèque et non incendiaire pour obtenir des informations sur l'installation d'une barrière.

Output Type	Code	Pin 1	Pin 2	Pin 3	Pin 4
mV & 4-Wire Voltage	000	-V	+S	+V	-S
3 Wire Voltage	000	-V	S	+V	Case
4-20mA (2 wire loop powered)	000	-V	N/C	+V	Case
Output Type w/ Option Codes	Code	Pin 1	Pin 2	Pin 3	Pin 4
4-20mA (2 wire loop powered)	615	-V	+V	N/C	Case
3 Wire Voltage	607/617	S	+V	Case	-V

Pin 1	Pin 2	Pin 3	Pin 4
+V	+S	-S	GND
+V	N/C	GRD	S
+V	N/C	-V	N/C

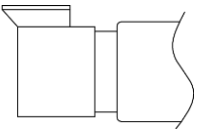
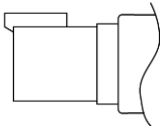
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

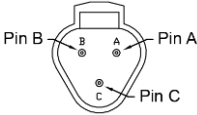
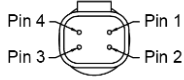
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INSTALLATION | WIRING GUIDE

AST Pressure Sensors

DT04 DEUTSCH CONNECTIONS

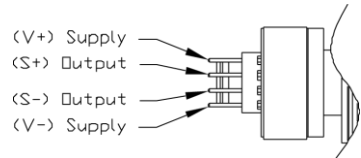
	DEUTSCH: DT04 - 3 Pin	DEUTSCH: DT04 - 4 Pin
		
AST Electrical Connection Option	"K"	"Z"

Output Type	Pin A	Pin B	Pin C	Pin 1	Pin 2	Pin 3	Pin 4
mV & 4-Wire Voltage	-	-	-	+V	GND	+S	-S
3 Wire Voltage	+V	GND	S	+V	GND	S	N/C
4-20mA (2 wire loop powered)	+V	-V	N/C	+V	-V	N/C	N/C
							

+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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AST Pressure Sensors

Molex™	Molex™
	
AST Electrical Connection Option	"G"
Mates w/	Molex 22-01-3047 with pin 08-50-0114

Output Type	Pin 1	Pin 2	Pin 3	Pin 4
mV & 4-Wire Voltage	+V	+S	-S	GND

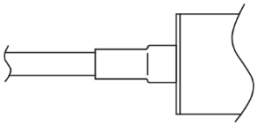
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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INSTALLATION | WIRING GUIDE

AST Pressure Sensors

**Pressure & Temperature
Cable / Hookup
Wire Connections
(AST20PT & AST45PT)**

	Cable
	
AST Electrical Connection Option	"A, B, C, D, L, M, N, P, X"
Gauge Wire	AST20PT- 24 AWG AST45PT - 22 AWG

**see data sheet for special options*

Output Type	Green	Black	Red	White
3 Wire Voltage	Temp (out)	-V (in)	+V (in)	Press (out)
4-20mA (2 wire loop powered) *	+Temp	-Press	+Press	-Temp
NOTICE FOR INTRINSICALLY SAFE and NON-INCENDIVE SENSORS - Refer to the Intrinsically Safe and Non-Incendive Installation Manuals for barrier installation information.				
AVIS RELATIF AUX CAPTEURS INTRINSIQUEMENT SÛRS ET NON INCENDIVE - Consultez les manuels d'installation à sécurité intrinsèque et non incendiaire pour obtenir des informations sur l'installation d'une barrière.				

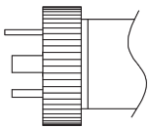
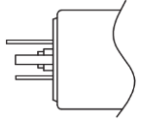
** For units with loop-powered 4-20mA output, the pressure loop must be powered or the temperature output will not operate.*

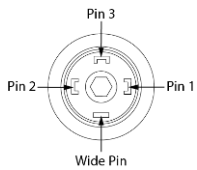
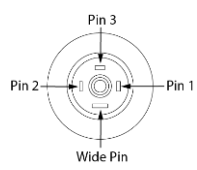
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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AST Pressure Sensors

Pressure & Temp. DIN (AST20PT)

	DIN 43650A 18.0mm	Mini-DIN 43650C 8.0mm
		
AST Electrical Connection Option	"I"	"E"
Mates w/	931 970-100 [conduit] or equivalent	933 023-100
AST Mating Connector Part #	A09171	A01980

Output Type	Pin 1	Pin 2	Pin 3	Wide Pin	Pin 1	Pin 2	Pin 3	Wide Pin
3 Wire Voltage	+V(in)	-V (in)	Press (out)	Temp (out)	Press (out)	-V (in)	+V (in)	Temp (out)
4-20mA (2 wire loop powered)*	+Press	-Press	+Temp	-Temp	+Press	-Press	+Temp	-Temp
								

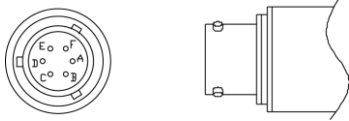
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

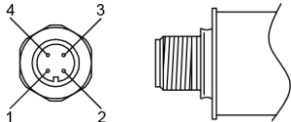
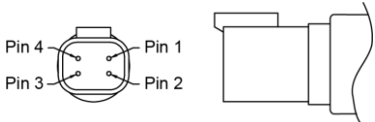
* For units with loop-powered 4-20mA output, the pressure loop must be powered or the temperature output will not operate.

INSTALLATION | WIRING GUIDE

AST Pressure Sensors

Pressure & Temp. Connections (AST20PT)

Bendix™: 6 Pin MIL-C-26482 (REF. MS3113)						
						
AST Electrical Connection Option	"R"					
Mates w/	PT06A-10-6S					
AST Mating Connector Part #	A04235					
Output Type	Pin A	Pin B	Pin C	Pin D	Pin E	Pin F
3 Wire Voltage	+V(in)	Press (out)	Temp (out)	-V (in)	N/C	N/C
4-20mA (2 wire loop powered)*	+Press	-Press	+Temp	-Temp	N/C	N/C

M12x1: 4 Pin		DEUTSCH: DT04 - 4 Pin	
			
AST Electrical Connection Option	"Y"	"Z"	

	Pin 1	Pin 2	Pin 3	Pin 4
3 Wire Voltage	+V(in)	Temp(out)	-V(in)	Press(out)
4-20mA (2 wire loop powered)*	+Press	+Temp	-Press	-Temp

	Pin 1	Pin 2	Pin 3	Pin 4
3 Wire Voltage	+V(in)	-V(in)	Press(out)	Temp(out)
4-20mA (2 wire loop powered)*	+Press	-Press	+Temp	-Temp

+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

* For units with loop-powered 4-20mA output, the pressure loop must be powered or the temperature output will not operate.

MANUFACTURING PLANT

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