



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.



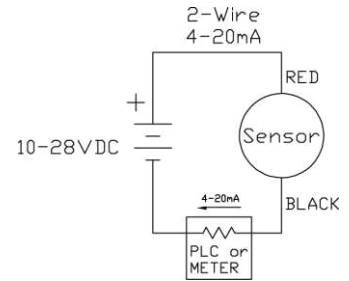
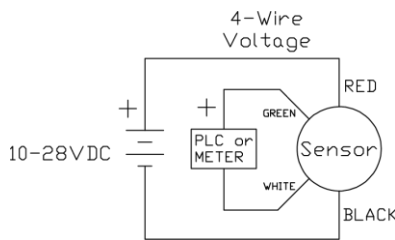
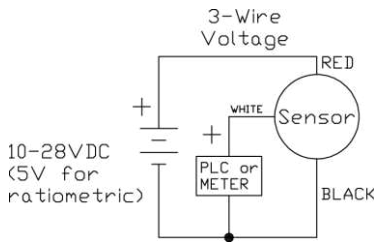
WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



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



Wiring Schematics

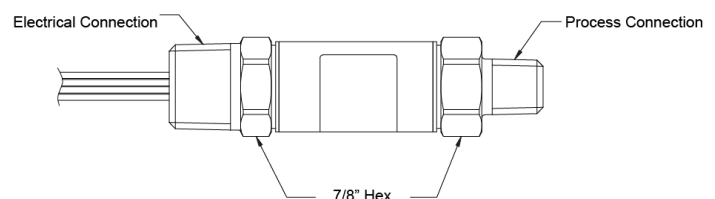


Output	mV	Voltage		
		0.5-4.5V ratiometric	1-5V, 1-6V, 0-5V	0-10V, 1-10V
Supply Voltage	5VDC typ., 10VDC max.	5VDC \pm 0.01V	10-28VDC	15-28VDC
Output Load	>1 M Ω	>10 K Ω	>10 K Ω	>10 K Ω
Operating Temperature	-40 to 105°C	-40 to 85°C	-40 to 85°C	-40 to 85°C

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

Mechanical Installation

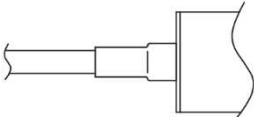
Use the hex flats closest to the process connection for installation into the process. For conduit connections, hold the product at the hex closest to the conduit connection.

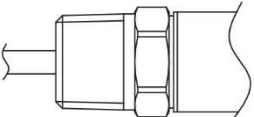


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AST Pressure Sensors

Cable / Hookup Wire Connections

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

Conduit with Cable	
	
AST Electrical Connection Option	"L, M, N, P"
Gauge Wire	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

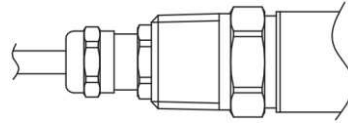
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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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

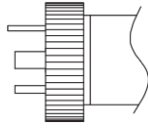
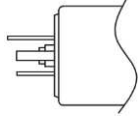
NOTICE FOR INTRINSICALLY SAFE SENSORS - Refer to the Intrinsically Safe Installation Manual for barrier installation information.

+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

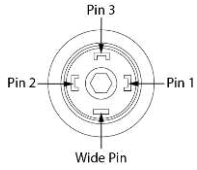
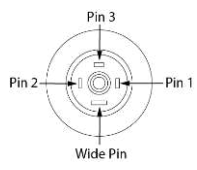
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AST Pressure Sensors

DIN

	DIN 43650A 18.0mm	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

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

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]

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



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- 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.

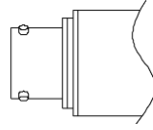
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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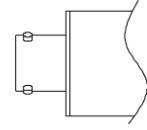
AST Pressure Sensors

Bendix™

6 Pin MIL-C-26482 (REF. MS3113)



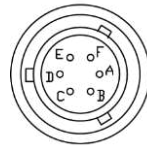
4 Pin MIL-C-26482 Series 1 (REF. MS3113)



AST Electrical Connection Option	"R"	"S"
Mates w/	PT06A-10-6S	PT06A-8-4S
AST Mating Connector Part #	A04235	N/A

NOTICE FOR INTRINSICALLY SAFE SENSORS - Refer to the Intrinsically Safe Installation Manual for barrier installation information

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

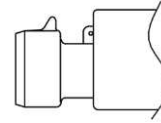
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AST Pressure Sensors

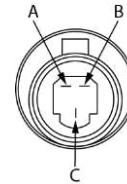
Packard™ Metri-Pack

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



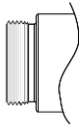
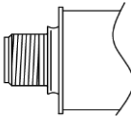
Output Type	Pin A	Pin B	Pin C
mV & 4-Wire Voltage	N/A	N/A	N/A
3 Wire Voltage	GND	+V	S
4-20mA (2 wire loop powered)	-V	+V	N/C

+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

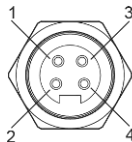
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AST Pressure Sensors

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.

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
			

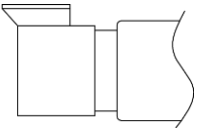
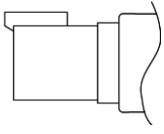
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

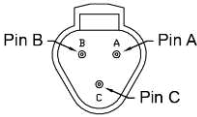
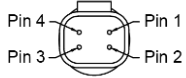
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AST Pressure Sensors

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
							

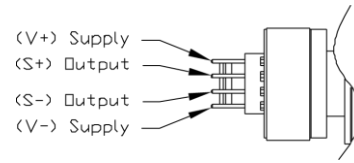
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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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

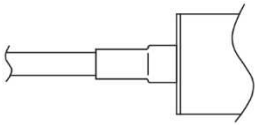
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

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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 HAZARDOUS AREA SENSORS (AST46PT) - Refer to operating instructions for installation information.				

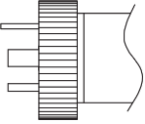
** For units with loop-powered 4-20mA output, the pressure loop must be powered or the temperature output will not operate.*

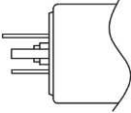
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

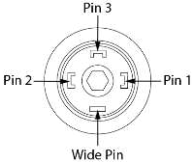
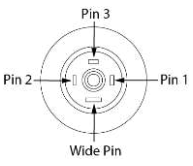
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AST Pressure Sensors

Pressure & Temp. DIN (AST20PT)

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

Mini-DIN 43650C 8.0mm	
	
AST Electrical Connection Option	"E"
Mates w/	933 023-100
AST Mating Connector Part #	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
									

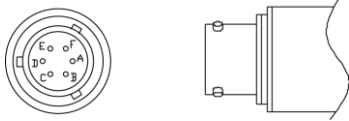
+V	Voltage Supply
-V	4-20mA Electrical Ground / Signal [see schematic]
S	Voltage Output Signal
GND	Voltage Electrical Ground
Case	Case / Earth Ground (Do not connect or tie the case ground to the electrical ground)
N/C	Not Connected

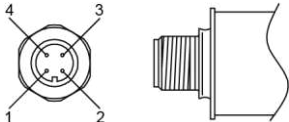
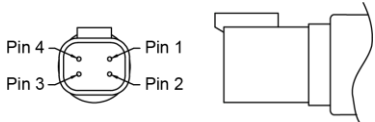
* For units with loop-powered 4-20mA output, the pressure loop must be powered or the temperature output will not operate.

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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.

NORTH AMERICA

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