

SSI Technologies MediaNugget™

Isolated, Absolute & Gage Pressure Sensors

Product Overview

Product Description

SSI's line of stainless steel, harsh media compatible, isolated absolute & gage pressure sensors represents a significant cost savings over currently available pressure sensors. These sensors are designed to operate over the range of -40°C to +105°C and offer superior stability and thermal performance, based on their original design for automotive applications. SSI, a leading OEM supplier of automotive sensors...having delivered more than 95 million to its customers, recently introduced the **MediaNugget™**, targeted at industrial and commercial applications where cost, size and performance are critical.

Typical Applications

- Refrigeration
- Calibration Equipment
- Fuel Cells
- Pumps
- Hydraulics
- Emissions Testing
- Process Control
- Spraying Systems
- Pneumatics
- Compressors
- Flow
- Robotics
- Hydrogen Storage

Standard Full Scale Pressure Ranges

- 15, 50, 75, 100, 200 and 300 Psig
- 15, 50, 75, 100, 200, 300, 500, 750, 1000, 1500, 2000, and 3000 Psia

New!

- Lower Pressure Ranges
- M12 & Mini DIN Connectors



MediaNugget™ sensors without signal conditioning for low-cost OEM applications (shown with and without Integral Harness)

Special Features

- All Laser-welded stainless steel design for media isolation
- Compact size, excellent price/performance ratio
- Custom pressure ranges available
- Custom mechanical interconnects available

Call us at (888) 477-4320 or visit our Web Site: <http://ssitechnologies.com>

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15 and 50 PSI MediaNugget™ Specifications

Parameter	Min	Typical	Max	Units
Bridge Resistance	4000	4700	5500	Ω
Sensitivity	400	500	600	μV/V/psi
TCR	-	2300	-	ppm/°C
TCS	-	-2100	-	ppm/°C
Offset	-3.5	0.0	3.5	MV/V
Offset Stability	-	-	20	μV/V
Repeatability	-	-	0.05	% of Span

Parameter	Min	Typical	Max	Units
Operating Temperature	-40	25	105	°C
Pressure Non-linearity	-	0.15	0.25	% Span
Pressure Hysteresis	-0.05	0	0.05	% Span
Proof Pressure	3X			FS Press.
Burst Pressure	10X			FS Press.
Response Time			1	ms

75 and 100 PSI MediaNugget™ Specifications

Parameter	Min	Typical	Max	Units
Bridge Resistance	4000	4700	5500	Ω
Sensitivity	115	145	175	μV/V/psi
TCR	-	2300	-	ppm/°C
TCS	-	-2100	-	ppm/°C
Offset	-0.5	2.0	5.5	MV/V
Offset Stability	-	-	20	μV/V
Repeatability	-	-	0.05	% of Span

Parameter	Min	Typical	Max	Units
Operating Temperature	-40	25	105	°C
Pressure Non-linearity	-	0.15	0.25	% Span
Pressure Hysteresis	-0.05	0	0.05	% Span
Proof Pressure	3X			FS Press.
Burst Pressure	10X			FS Press.
Response Time			1	ms

200, 300, 500, and 750 PSI MediaNugget™ Specifications

Parameter	Min	Typical	Max	Units
Bridge Resistance	4000	4700	5500	Ω
Sensitivity	60	70	80	μV/V/psi
TCR	-	2300	-	ppm/°C
TCS	-	-2100	-	ppm/°C
Offset	-0.5	2.0	5.5	MV/V
Offset Stability	-	-	20	μV/V
Repeatability	-	-	0.05	% of Span

Parameter	Min	Typical	Max	Units
Operating Temperature	-40	25	105	°C
Pressure Non-linearity	-	0.15	0.25	% Span
Pressure Hysteresis	-0.05	0	0.05	% Span
Proof Pressure	3X			FS Press.
Burst Pressure	10X			FS Press.
Response Time			1	ms

1000, 1500, 2000 and 3000 PSI MediaNugget™ Specifications

Parameter	Min	Typical	Max	Units
Bridge Resistance	4200	5000	5700	Ω
Sensitivity	10	12	14	μV/V/psi
TCR	-	2300	-	ppm/°C
TCS	-	-2100	-	ppm/°C
Offset	-5.5	2.0	9.5	MV/V
Offset Stability	-	-	20	μV/V
Repeatability	-	-	0.05	% of Span

Parameter	Min	Typical	Max	Units
Operating Temperature	-40	25	105	°C
Pressure Non-linearity	-	0.3	0.5	% Span
Pressure Hysteresis	-0.05	0	0.05	% Span
Proof Pressure	3X			FS Press.
Burst Pressure			15,000	Psia
Response Time			1	ms

- Unless otherwise noted all values are at 25°C

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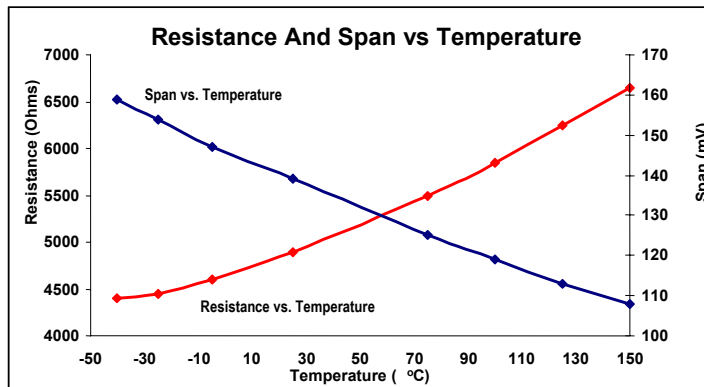
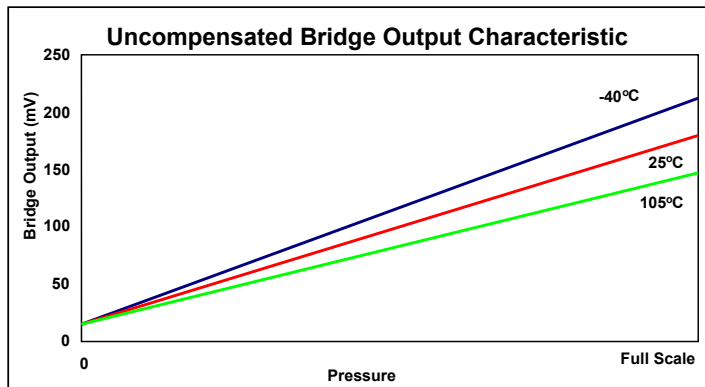
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Temperature Characteristics Performance Tables



Reliability and Environmental Performance

	Test Conditions	Value	Units
Wetted Materials	304L & 316L Stainless Steel	-	-
Pressure/Temperature Cycles ¹	0 to FS @ 8Hz; and -40°C to 105°C	>1.8x10 ⁶	Cycles
Thermal Shock	105°C to -40°C, 0.5 hr soak at Temp. (2s Transfer)	250	Cycles
Vibration	10 to 2050 Hz, 20g Sinusoidal, 3 Axes	144	Hours
Humidity	85°C and 90% to 95% R.H.	250	Hours
Weight	Model 31 with M12 x 1.5 6g 304L Stainless Port	≤ 47	grams

¹Pressure cycling performed at rated full scale pressure.

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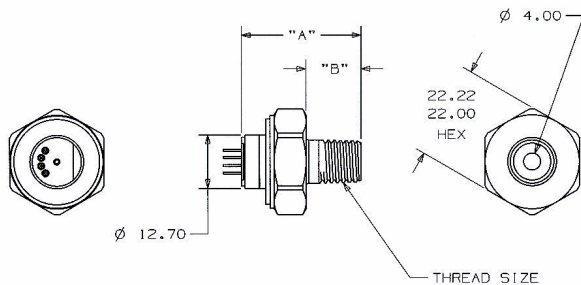
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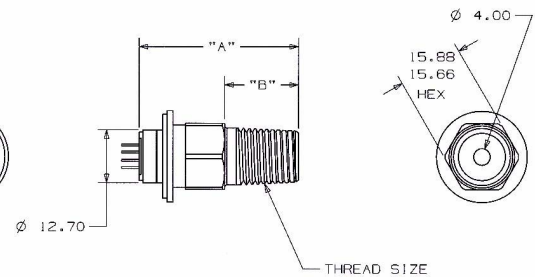
Product Overview

Standard Packaging Options



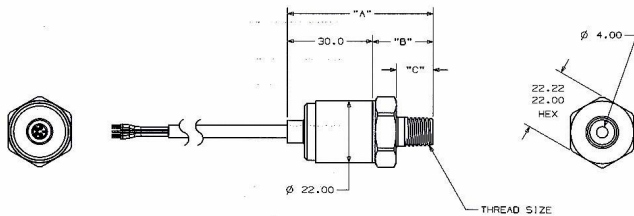
THREAD SIZE	LENGTH "A"	LENGTH "B"
1/4-18 NPT	33.3	18.0
1/8-27 NPT	28.3	13.0
M12-1.5 6g	26.3	11.0
7/16-20 UNF	26.3	11.0
3/8-24 UNF	24.8	9.5

Pins with 5/8" Hex



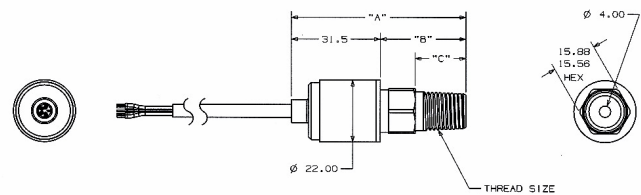
THREAD SIZE	LENGTH "A"	LENGTH "B"
1/4-18 NPT	38.8	18.0
1/8-27 NPT	33.8	13.0
M12-1.5 6g	31.8	11.0
7/16-20 UNF	31.8	11.0
3/8-24 UNF	30.3	9.5

Pins with 22mm Hex



THREAD SIZE	LENGTH "A"	LENGTH "B"	LENGTH "C"
1/4-18 NPT	56.6	26.0	18.0
1/8-27 NPT	51.8	21.0	13.0
M12-1.5 6g	46.6	19.0	11.0
7/16-20 UNF	49.8	19.0	11.0
3/8-24 UNF	46.1	17.5	9.5

Integral Harness with 5/8" Hex



THREAD SIZE	LENGTH "A"	LENGTH "B"	LENGTH "C"
1/4-18 NPT	62.0	30.5	18.0
1/8-27 NPT	57.0	25.5	13.0
M12-1.5 6g	55.0	23.5	11.0
7/16-20 UNF	55.0	23.5	11.0
3/8-24 UNF	53.5	22.0	9.5

Integral Harness with 22 mm Hex

Harness Construction: PVC Jacketed 24 AWG Wire

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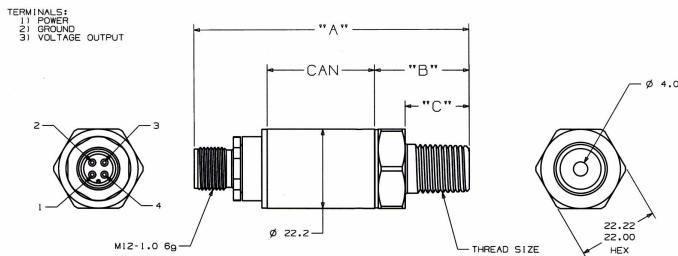
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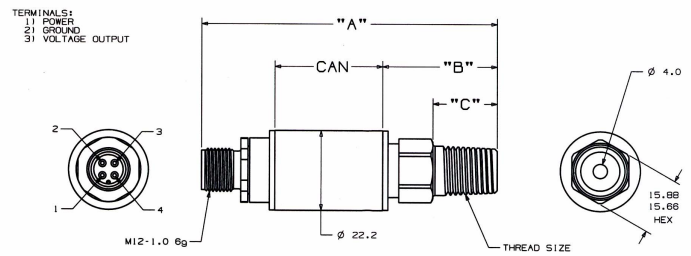
Product Overview

Standard Packaging Options (Continued)



THREAD SIZE	LENGTH "A"		LENGTH "B"	LENGTH "C"
	30mm CAN	20mm CAN		
1/4-18 NPT	77.0	67.0	26.0	18.0
1/8-27 NPT	72.0	62.0	21.0	13.0
M12-1.5 6g	70.0	60.0	19.0	11.0
7/16-20 UNF	70.0	60.0	19.0	11.0
3/8-24 UNF	66.5	56.5	17.5	9.5

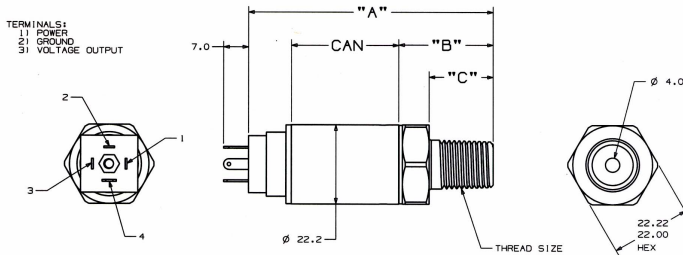
M12 4 Pin Micro Connector with 22mm Hex



THREAD SIZE	LENGTH "A"		LENGTH "B"	LENGTH "C"
	30mm CAN	20mm CAN		
1/4-18 NPT	82.5	72.5	32.0	18.0
1/8-27 NPT	77.5	67.5	27.0	13.0
M12-1.5 6g	75.5	65.5	25.0	11.0
7/16-20 UNF	75.5	65.5	25.0	11.0
3/8-24 UNF	74.0	64.0	23.5	9.5

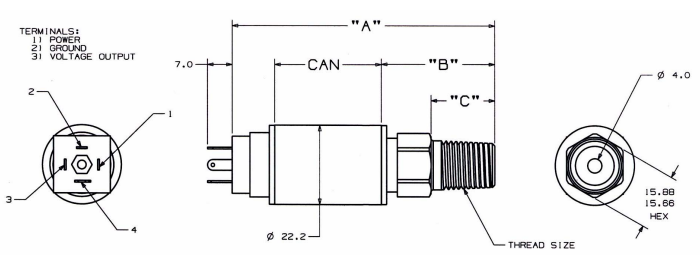
M12 4 Pin Micro Connector with 5/8" Hex

For MediaNugget™ with M12 4 Pin Micro Connectors use the 20mm CAN designation above.



THREAD SIZE	LENGTH "A"		LENGTH "B"	LENGTH "C"
	30mm CAN	20mm CAN		
1/4-18 NPT	68.5	58.5	26.5	18.0
1/8-27 NPT	63.5	53.5	27.0	13.0
M12-1.5 6g	61.5	51.5	25.0	11.0
7/16-20 UNF	61.5	51.5	25.0	11.0
3/8-24 UNF	60.0	50.0	23.5	9.5

DIN 43650 Micro-mini Connector with 22mm Hex



THREAD SIZE	LENGTH "A"		LENGTH "B"	LENGTH "C"
	30mm CAN	20mm CAN		
1/4-18 NPT	74.0	64.0	32.0	18.0
1/8-27 NPT	69.0	59.0	27.0	13.0
M12-1.5 6g	67.0	57.0	25.0	11.0
7/16-20 UNF	67.0	57.0	25.0	11.0
3/8-24 UNF	65.5	55.5	23.5	9.5

DIN 4365 Micro-mini Connector with 5/8" Hex

For MediaNugget™ with DIN 43650 Micro-mini Connectors use the 20mm CAN designation above.

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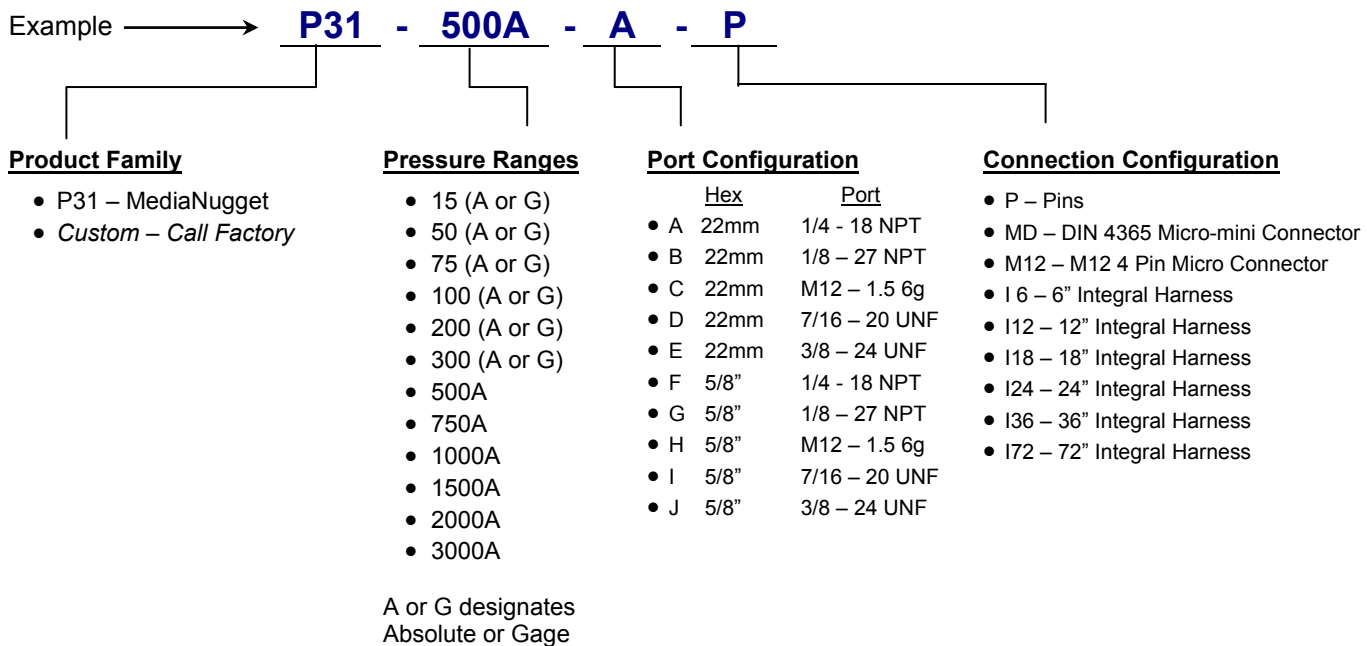
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Pressure Sensor Ordering System

The following explains SSI's pressure sensor order number sequence.



To place an order, or for custom orders or specifications not listed, call SSI toll-free at **(888) 477-4320**

Limited Warranty

All SSI products are warranted against defective materials and workmanship for a period of one (1) year from the date of delivery to the original purchaser. Any product that is found to be defective within the one year period will be replaced or repaired at the discretion of SSI. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE. SSI is not an expert in the customer's technical field and therefore does not warrant the suitability of its products for the applications selected by the customer. SSI accepts no responsibility for misuse, misapplication or unauthorized modification of its products. SSI's obligation under this limited warranty is strictly and exclusively limited to the repair or replacement free of charge of such products as are to be found to be defective in material or workmanship on the condition that the purchaser gives prompt written notice to SSI of any claim to breach of warranty within the warranty period, and if requested, returns the defective product(s) to SSI. SSI will not assume any expenses or liability for repairs made to its products outside of its plant without its prior written consent. SSI reserves the right to satisfy its warranty obligation in full, with respect to defective products, by the payment to the purchaser of all sums paid by the purchaser to SSI for such products. IN NO EVENT SHALL SSI BE LIABLE FOR CLAIMS (BASED UPON BREACH OR EXPRESS OR IMPLIED WARRANTY, NEGLIGENCE OR OTHERWISE) FOR ANY DAMAGES, WHETHER DIRECT, IMMEDIATE, INCIDENTAL, FORSEEABLE, CONSEQUENTIAL, OR SPECIAL. SSI reserves the right to change its specifications at any time without notice.

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