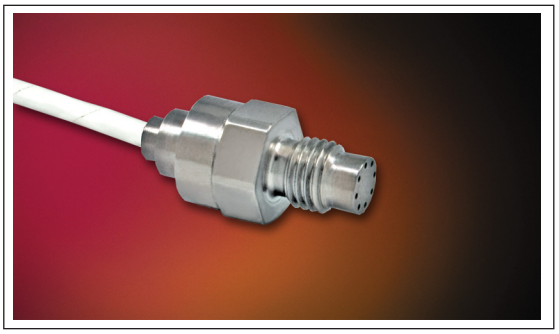
HIGH TEMPERATURE IS® PRESSURE TRANSDUCER

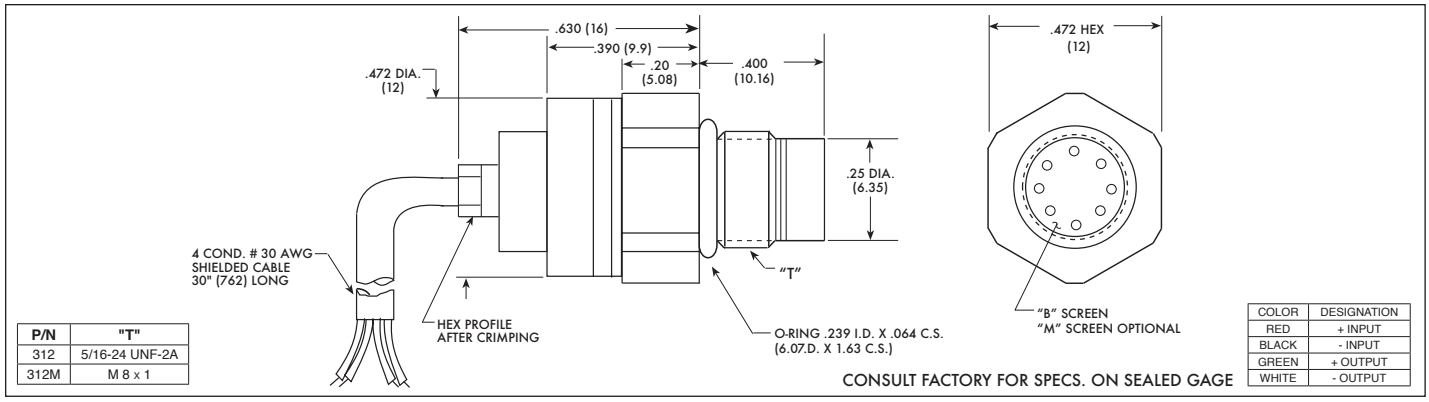
HEL-312 (M) SERIES

- Small Pressure Sensitive Area
- Patented Leadless Technology **VIS**®
- High Natural Frequency
- No Internal Lead Flexing
- Extra Low G Sensitivity
- -65°F To 525°F Temperature Capability



The ruggedness of this sensor has not compromised its performance. It was designed for ease of installation and will operate properly in any medium compatible with 15-5 SS or SiO_2. Coupled with high temperature, its Patented Leadless Construction makes it possible for the sensing unit to be installed in such a way that will not compromise its high natural frequency.
Part performance not guaranteed if used in water.

Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the HEL-312 transducer.



P/N	"T"
312	5/16-24 UNF-2A
312M	M 8 x 1

COLOR	DESIGNATION
RED	+ INPUT
BLACK	- INPUT
GREEN	+ OUTPUT
WHITE	- OUTPUT

INPUT	Pressure Range	0.7 10	1.0 15	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI
	Operational Mode	Absolute, Gage, Differential		Absolute, Gage, Sealed Gage, Differential			Absolute, Sealed Gage			
	Over Pressure	2 Times Rated Pressure to 500 PSI (35 BAR), 1.5 Times Rated Pressure Above 500 PSI (35 BAR)								
	Burst Pressure	3 Times Rated Pressure to a Maximum of 3000 PSI (210 BAR)								
	Pressure Media	All Nonconductive, Noncorrosive Liquids or Gases (Most Conductive Liquids and Gases - Please Consult Factory)								
	Rated Electrical Excitation	10 VDC/AC								
	Maximum Electrical Excitation	12 VDC/AC								
	Input Impedance	1000 Ohms (Min.)								
OUTPUT	Output Impedance	1000 Ohms (Nom.)								
	Full Scale Output (FSO)	100 mV (Nom.)								
	Residual Unbalance	± 5 mV (Typ.)								
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)								
	Resolution	Infinitesimal								
	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	175	200	240	300	380	550	700	1000	1400
	Acceleration Sensitivity % FS/g Perpendicular	$1.0x10^{-3}$	$6.5x10^{-4}$	$5.0x10^{-4}$	$3.0x10^{-4}$	$1.5x10^{-4}$	$1.0x10^{-4}$	$6.0x10^{-5}$	$4.5x10^{-5}$	$2.0x10^{-5}$
	Insulation Resistance	100 Megohm Min. @ 50 VDC								
ENVIRONMENTAL	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C)								
	Compensated Temperature Range	+80°F to +450°F (+25°C to +232°C)								
	Thermal Zero Shift	± 1% FS/100°F (Typ.)								
	Thermal Sensitivity Shift	± 1% /100°F (Typ.)								
	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)								
	Mechanical Shock	20g half Sine Wave 11 msec. Duration								
PHYSICAL	Electrical Connection	4 Conductor 30 AWG Shielded Cable 30" Long (Optional Connector Available)								
	Weight	17 Grams (Max.) Excluding Cable								
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology								
	Mounting Torque	50 Inch-Pounds (Max.) 6Nm								

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (J)

Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.

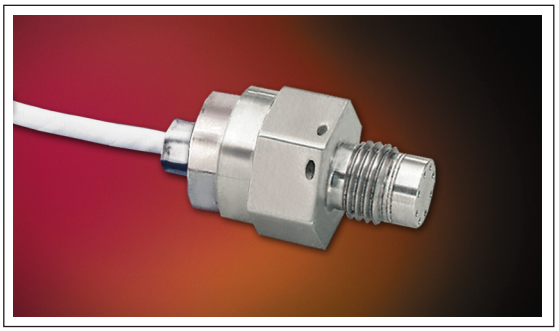
KULITE SEMICONDUCTOR PRODUCTS, INC. • One Willow Tree Road • Leonia, New Jersey 07605 • Tel: 201 461-0900 • Fax: 201 461-0990 • http://www.kulite.com

三協インタナショナル株式会社 03-3662-8100

HIGH TEMPERATURE IS® PRESSURE TRANSDUCER

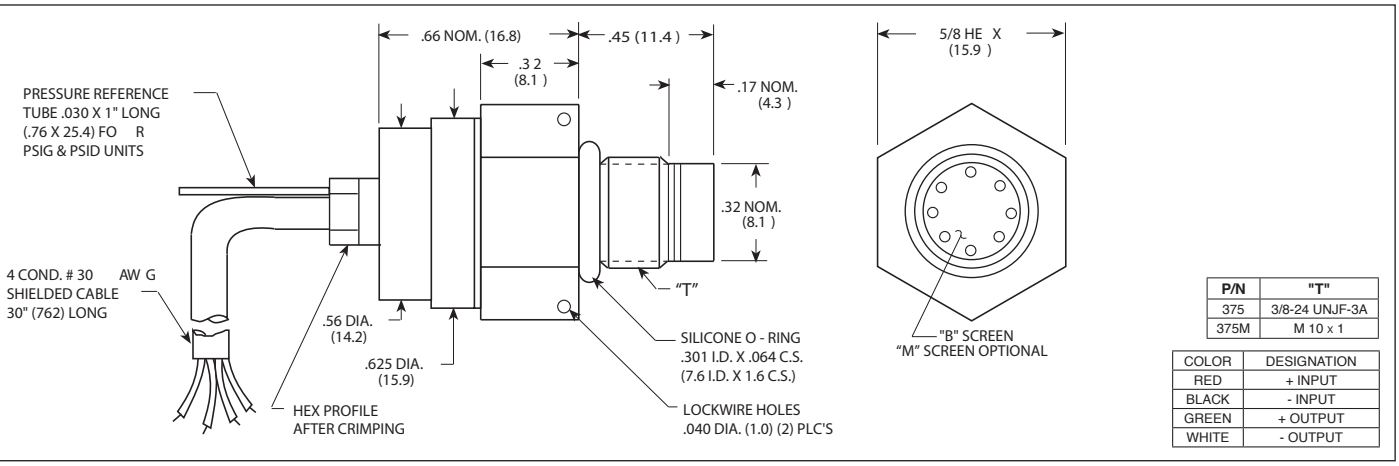
HEL-375 (M) SERIES

- Small Pressure Sensitive Area
- Patented Leadless Technology **VIS®**
- High Natural Frequency
- No Internal Lead Flexing
- Extra Low G Sensitivity
- -65°F To 525°F Temperature Capability



The ruggedness of this sensor has not compromised its performance. It was designed for ease of installation and will operate properly in any medium compatible with 15-5 SS or SiO_2. Coupled with high temperature, its Patented Leadless Construction makes it possible for the sensing unit to be installed in such a way that will not compromise its high natural frequency.
Part performance not guaranteed if used in water.

Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the HEL-375 transducer.



P/N	"T"
375	3/8-24 UNJF-3A
375M	M 10 x 1

COLOR	DESIGNATION
RED	+ INPUT
BLACK	- INPUT
GREEN	+ OUTPUT
WHITE	- OUTPUT

INPUT	Pressure Range	0.7 10	1.0 15	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI
	Operational Mode	Absolute, Gage, Differential		Absolute, Gage, Sealed Gage, Differential			Absolute, Sealed Gage			
	Over Pressure	2 Times Rated Pressure to 500 PSI (35 BAR), 1.5 Times Rated Pressure Above 500 PSI (35 BAR)								
	Burst Pressure	3 Times Rated Pressure to a Maximum of 3000 PSI (210 BAR)								
	Pressure Media	Most Liquids and Gases - Please Consult Factory (All Media May Not Be Suitable with O-Ring Supplied)								
	Rated Electrical Excitation	10 VDC/AC								
	Maximum Electrical Excitation	12 VDC/AC								
	Input Impedance	1000 Ohms (Min.)								
OUTPUT	Output Impedance	1000 Ohms (Nom.)								
	Full Scale Output (FSO)	100 mV (Nom.)								
	Residual Unbalance	± 5 mV (Typ.)								
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)								
	Resolution	Infinitesimal								
	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	175	200	240	300	380	550	700	1000	1400
	Acceleration Sensitivity % FS/g Perpendicular	$1.0x10^{-3}$	$6.5x10^{-4}$	$5.0x10^{-4}$	$3.0x10^{-4}$	$1.5x10^{-4}$	$1.0x10^{-4}$	$6.0x10^{-5}$	$4.5x10^{-5}$	$2.0x10^{-5}$
	Insulation Resistance	100 Megohm Min. @ 50 VDC								
ENVIRONMENTAL	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C)								
	Compensated Temperature Range	+80°F to +450°F (+25°C to +232°C)								
	Thermal Zero Shift	± 1% FS/100°F (Typ.)								
	Thermal Sensitivity Shift	± 1% /100°F (Typ.)								
	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)								
	Mechanical Shock	20g half Sine Wave 11 msec. Duration								
PHYSICAL	Electrical Connection	4 Conductor 30 AWG Shielded Cable 30" Long								
	Weight	17 Grams (Max.) Excluding Cable								
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology								
	Mounting Torque	80 Inch-Pounds (Max.) 9 Nm								

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (K)

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HEL-375 (M) CO SERIES

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- No Internal Lead Flexing
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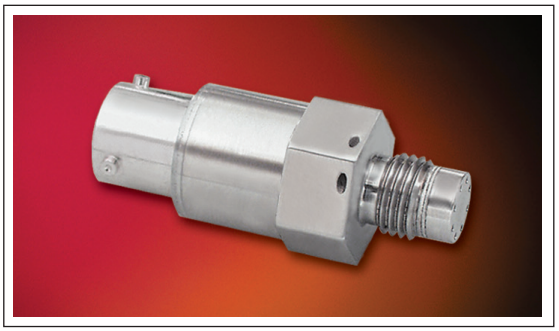
- -65°F To 525°F Temperature Capability



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Part performance not guaranteed if used in water.

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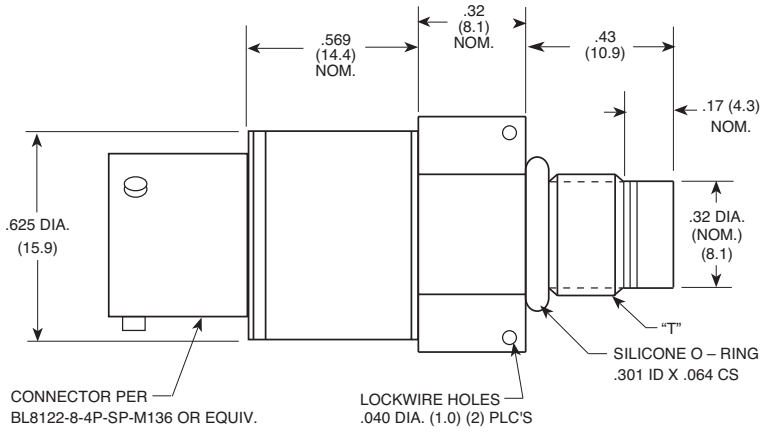

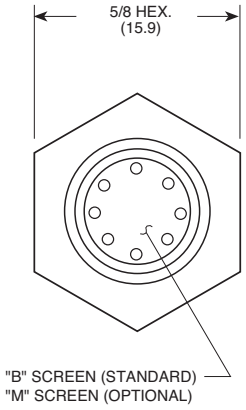

P/N	"T"
375	3/8-24 UNJF-3A
375M	M 10 x 1

PIN	DESIGNATION
A	+ INPUT
B	- INPUT
C	+ OUTPUT
D	- OUTPUT

INPUT	Pressure Range	0.7 10	1.0 15	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI
	Operational Mode	Absolute		Absolute, Sealed Gage						
	Over Pressure	2 Times Rated Pressure to 500 PSI (35 BAR), 1.5 Times Rated Pressure Above 500 PSI (35 BAR)								
	Burst Pressure	3 Times Rated Pressure to a Maximum of 3000 PSI (210 BAR)								
	Pressure Media	Most Liquids and Gases - Please Consult Factory (All Media May Not Be Suitable with O-Ring Supplied)								
	Rated Electrical Excitation	10 VDC/AC								
	Maximum Electrical Excitation	12 VDC/AC								
	Input Impedance	1000 Ohms (Min.)								
OUTPUT	Output Impedance	1000 Ohms (Nom.)								
	Full Scale Output (FSO)	100 mV (Nom.)								
	Residual Unbalance	± 5 mV (Typ.)								
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)								
	Resolution	Infinitesimal								
	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	175	200	240	300	380	550	700	1000	1400
	Acceleration Sensitivity % FS/g Perpendicular	$1.0x10^{-3}$	$6.5x10^{-4}$	$5.0x10^{-4}$	$3.0x10^{-4}$	$1.5x10^{-4}$	$1.0x10^{-4}$	$6.0x10^{-5}$	$4.5x10^{-5}$	$2.0x10^{-5}$
	Insulation Resistance	100 Megohm Min. @ 50 VDC								
ENVIRONMENTAL	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C)								
	Compensated Temperature Range	+80°F to +450°F (+25°C to +232°C)								
	Thermal Zero Shift	± 1% FS/100°F (Typ.)								
	Thermal Sensitivity Shift	± 1% /100°F (Typ.)								
	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)								
	Mechanical Shock	20g half Sine Wave 11 msec. Duration								
PHYSICAL	Electrical Connection	BL8112-8-4P-SP-M136 Connector or Equiv.								
	Weight	17 Grams (Max.) Excluding Cable								
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology								
	Mounting Torque	80 Inch-Pounds (Max.) 9 Nm								

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (A) Continuous development and refinement of our products may result in specification changes without notice.
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