

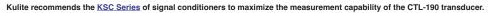
CRYOGENIC MINIATURE RUGGEDIZED PRESSURE TRANSDUCER

CTL-190 (M) SERIES

- Cryogenic Operation -320°F to +250°F (-195.5°C to +120°C)
- Low Ranges Available
- Patented Leadless Technology VIS®
- Excellent Stability and Repeatability
- · High Frequency Response

Similar in design to the XTL-190 Series, these sensors are specifically intended for use at cryogenic temperature. The extremely good low temperature stability of Kulite Sensors make them ideally suited for this application.

Part performance not guaranteed if used in water.





PRESSURE REFERENCE TUBE .032 X 1" LONG (.8 X 25.4) FOR GAGE & DIFFERENTIAL UNITS 148 DIA. (3.8) THREAD "T" TEFLON O-RING .176 I.D. x .040 C.S.		COLOR RED WHITE BLACK GREEN	- (ON SIGNATION INPUT DUTPUT INPUT OUTPUT
(4.5.I.D. x 1.0 C.S.)	P/N	"T"		"L"
The state of the s	190S	10-32 UNF-2A	.437	11.1 mm
4 COND. # 30 AWG	190SM	M5 x .8	.437	11.1 mm
Shielded Cable	190L	10-32 UNF-2A	.760	19.3 mm
グ 4 ⁴ 36" (914) LONG	190LM	M5 x .8	.760	19.3 mm

	Pressure Range	0.35 5	0.7 10	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI		
	Operational Mode	Absolute, Gage, Absolute, Gage, Sealed Gage, Absolute, Sealed Gage Differential Differential Absolute, Sealed Gage						ealed Gage				
	Over Pressure	2 Times Rated Pressure to 500 PSI (35 BAR), 1.5 Times Rated Pressure Above 500 PSI (35 BAR)										
INPUT	Burst Pressure	3 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)										
Z	Pressure Media	Most Co	nductive Liqui	ds and Gases	(Please Consu	ılt Factory) (All	Media May N	ot Be Suitable	With O-Ring S	upplied)		
	Rated Electrical Excitation	10 VDC										
	Maximum Electrical Excitation	12 VDC										
	Input Impedance				1(000 Ohms (Mir	า.)					
	Output Impedance				10	00 Ohms (Nor	n.)					
	Full Scale Output (FSO)					100 mV (Nom.))					
	Residual Unbalance					± 5 mV (Typ.)						
5	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)										
OUTPUT	Resolution	Infinitesimal										
ō	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	150	175	240	300	380	550	700	1000	1400		
	Acceleration Sensitivity % FS/g Perpendicular	1.5x10 ⁻³	1.0x10 ⁻³	5.0x10 ⁻⁴	3.0x10 ⁻⁴	1.5x10 ⁻⁴	1.0x10 ⁻⁴	6.0x10 ⁻⁵	4.5x10 ⁻⁵	2.0x10 ⁻⁵		
	Insulation Resistance				100 Me	gohm Min. @	50 VDC					
	Operating Temperature Range	-320°F to +250°F (-195.5°C to +120°C)										
٩L	Compensated Temperature Range	-300°F to +100°F (-184.4°C to +37.5°C)										
ENVIRONMENTAL	Thermal Zero Shift	± 2% FS/100°F (Typ.) (± 3% FS/100°F Max.)			± 1% FS/100°F (Typ.) (± 2% FS/100°F Max.)							
IRON	Thermal Sensitivity Shift		2% /100°F (Ty 3% /100°F Ma		± 1% /100°F (Typ.) (± 2% /100°F Max.)							
EN	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)										
	Mechanical Shock	20g half Sine Wave 11 msec. Duration										
	Electrical Connection	4 Conductor 30 AWG Shielded Cable 36" Long										
CAL	Weight	4 Grams (Nom.) Excluding Cable										
PHYSICAL	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology										
	Mounting Torque	15 Inch-Pounds (Max.) 1.7 Nm										

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (N) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. 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.



CRYOGENIC MINIATURE RUGGEDIZED PRESSURE TRANSDUCER

CTL-312 (M) SERIES

- Cryogenic Operation -320°F to +250°F (-195.5°C to +120°C)
- Low Ranges Available
- Patented Leadless Technology VIS®
- · Excellent Stability and Repeatability
- · High Frequency Response

Similar in design to the HKL-312 Series, these sensors are specifically intended for use at cryogenic temperature. The extremely good low temperature stability of Kulite Sensors make them ideally suited for this application.

Part performance not guaranteed if used in water.

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



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	Pressure Range	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI		
	Operational Mode	Absolute, Gage, Sealed Gage, Differential Absolute, Sealed Gage								
_	Over Pressure	2 Tir	mes Rated Pressu	re to 500 PSI (35 E	BAR), 1.5 Times R	ated Pressure Abo	ove 500 PSI (35 BA	AR)		
INPUT	Burst Pressure		3 Tin	nes Rated Pressure	e to a Maximum o	f 5000 PSI (350 B	AR)			
=	Pressure Media	Most Conductive Liquids And Gases - Please Consult Factory (All Media May Not Be Suitable With O-Ring Supplied)								
	Rated Electrical Excitation	10 VDC								
	Maximum Electrical Excitation				12 VDC					
	Input Impedance			1	000 Ohms (Min.)					
	Output Impedance			10	000 Ohms (Nom.)					
	Full Scale Output (FSO)				100 mV (Nom.)					
	Residual Unbalance				± 5 mV (Typ.)					
15	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)								
OUTPUT	Resolution	Infinitesimal								
0	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	240	300	380	550	700	1000	1400		
	Acceleration Sensitivity % FS/g Perpendicular	5.0x10 ⁻⁴	3.0x10 ⁻⁴	1.5x10 ⁻⁴	1.0x10 ⁻⁴	6.0x10 ⁻⁵	4.5x10 ⁻⁵	2.0x10 ⁻⁵		
	Insulation Resistance			100 Me	egohm Min. @ 50	VDC				
	Operating Temperature Range	-320°F to +250°F (-195.5°C to +120°C)								
ENVIRONMENTAL	Compensated Temperature Range	-300°F to +100°F (-184.4°C to +37.5°C)								
ME	Thermal Zero Shift	± 1% FS/100°F (Typ.)								
S.	Thermal Sensitivity Shift			±	1% /100°F (Typ.)					
N	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)								
L	Mechanical Shock	20g half Sine Wave 11 msec. Duration								
	Electrical Connection	4 Conductor 30 AWG Shielded Cable 30" Long								
CA	Weight	12 Grams (Nom.) Excluding Cable								
PHYSICAL	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon Patented Leadless Technology								
Mounting Torque 50 Inch-Pounds (Max.) 6 Nm										

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (J) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. 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.



CRYOGENIC MINIATURE RUGGEDIZED PRESSURE TRANSDUCER

CTL-375 (M) SERIES

- Cryogenic Operation -320°F to +250°F (-195.5°C to +120°C)
- Low Ranges Available
- Patented Leadless Technology VIS®
- · Excellent Stability and Repeatability
- · High Frequency Response

Similar in design to the HKL-375 Series, these sensors are specifically intended for use at cryogenic temperature. The extremely good low temperature stability of Kulite Sensors make them ideally suited for this application.

Part performance not guaranteed if used in water.

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



PRESSURE REFERENCE TUBE .030 X 1" LONG (.76 X 25.4) FOR GAGE & DIFFERENTIAL UNITS A COND. # 30 AWG SHIELDED CABLE 30" (762) LONG P/N "T" 375 3/8-24 UNJF-3A 375M M 10 x 1 TEFLON O.RING .394 LD. X. 059 C.S. (10.0 LD. X 1.5 C.S.) LOCKWIRE HOLES .040 DIA. (1.0) (2) PLC'S	COLOR DESIGNATION RED +INPUT BLACK -INPUT GREEN + OUTPUT WHITE - OUTPUT
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	Pressure Range	1.7 25	3.5 50	7 100	17 250	35 500	70 1000	140 BAR 2000 PSI			
	Operational Mode	Absolute, Gage, Sealed Gage, Differential Absolute, Sealed Gage									
1.	Over Pressure	2 Tir	2 Times Rated Pressure to 500 PSI (35 BAR), 1.5 Times Rated Pressure Above 500 PSI (35 BAR)								
INPUT	Burst Pressure	3 Times Rated Pressure to a Maximum of 5000 PSI (350 BAR)									
=	Pressure Media	Most Conduct	tive Liquids And G	ases - Please Cons	sult Factory (All M	edia May Not Be S	Suitable With O-Ri	ng Supplied)			
	Rated Electrical Excitation		10 VDC								
	Maximum Electrical Excitation				12 VDC						
	Input Impedance			1	000 Ohms (Min.)						
	Output Impedance			10	000 Ohms (Nom.)						
	Full Scale Output (FSO)				100 mV (Nom.)						
	Residual Unbalance				± 5 mV (Typ.)						
Į,	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)									
OUTPUT	Resolution	Infinitesimal									
	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	240	300	380	550	700	1000	1400			
	Acceleration Sensitivity % FS/g Perpendicular	5.0x10 ⁻⁴	3.0x10 ⁻⁴	1.5x10 ⁻⁴	1.0x10 ⁻⁴	6.0x10 ⁻⁵	4.5x10 ⁻⁵	2.0x10 ⁻⁵			
	Insulation Resistance			100 Me	egohm Min. @ 50	VDC					
	Operating Temperature Range			-320°F to +2	250°F (-195.5°C to	+120°C)					
ENVIRONMENTAL	Compensated Temperature Range	-300°F to +100°F (-184.4°C to +37.5°C)									
ME	Thermal Zero Shift	± 1% FS/100°F (Typ.)									
RO No	Thermal Sensitivity Shift	± 1% /100°F (Typ.)									
N	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)									
"	Mechanical Shock	20g half Sine Wave 11 msec. Duration									
	Electrical Connection	4 Conductor 30 AWG Shielded Cable 30" Long									
PHYSICAL	Weight	17 Grams (Nom.) Excluding Cable									
HYS	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. (O) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. 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.