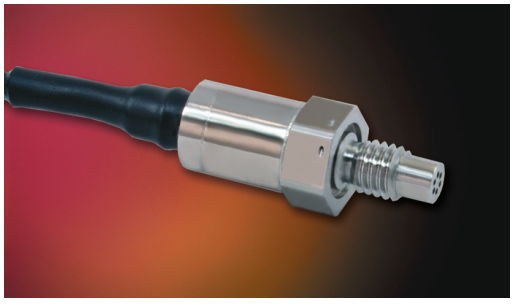
ULTRAMINIATURE 5V OUTPUT HIGH TEMPERATURE PRESSURE TRANSDUCER WITH INTEGRATED TEMPERATURE SENSOR

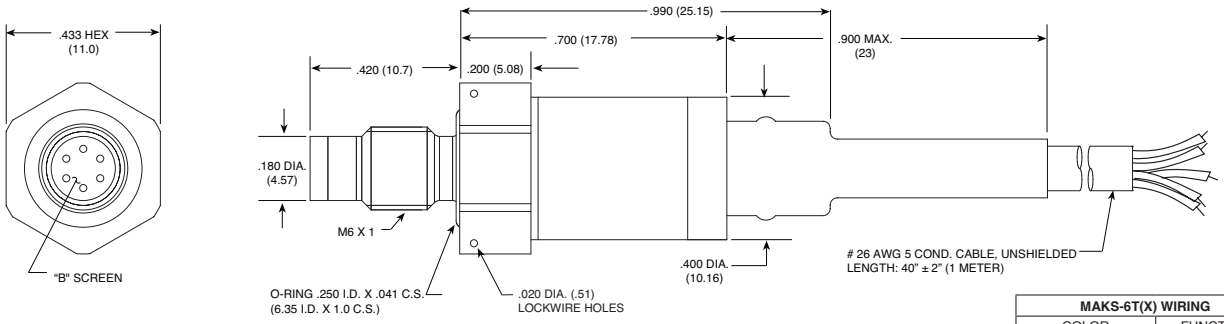
MAKS-6T(X)

- Smallest High Performance Amplified Transducer Worldwide
- High Temperature Electronics 392°F (200°C)
- Rugged Design Provides Compatibility With Most Corrosive and Conductive Media
- Patented Leadless Technology **VIS**®
- High Over Pressure Capability
- Adaptable For A Wide Variety Of Applications
- Designed and Engineered For Severe Environmental Conditions



The MAKS-6T(X) is one of the newest generation of Kulite's smallest miniature amplified transducers currently available. The sensing sub-assembly is protected from mechanical damage by a protective screen, which has been shown to have minimal influence on the frequency response of the sensor.

Incorporation of Kulite proprietary high temperature 392°F (200°C) electronics within the main body allows for operation from an unregulated power supply of 8 to 16VDC.



RECOMMENDED MOUNTING TORQUE		
PRESSURE	CALIBRATED TORQUE	
≤ 100 mBar (1.45 PSI)	4 Nm	35.40 in-lb
101 mBar to 12 Bar (1.46 to 174 PSI)	4 Nm	35.40 in-lb
12.1 Bar to 69.9 Bar (175 to 1014 PSI)	6 Nm	53.10 in-lb
> 70 Bar (1015 PSI)	7 Nm	61.95 in-lb

(X) Denotes FSR and Residual Unbalance Options (A), (B), (C), (D) or (E).

*ALL MEDIA MAY NOT BE SUITABLE WITH THE O-RING SUPPLIED

MAKS-6T(X) WIRING	
COLOR	FUNCTION
RED	+ EXCITATION
BLACK	- EXCITATION
GREEN	+ SIGNAL
YELLOW OR WHITE	TEMP. OUT
BLUE	TEMP. OUT

INPUT	Pressure Range	1 15	5 73	10 145	15 218	80 1160	140 2030	210 3045	300 BAR 4350 PSI
	Operational Mode	Absolute, Sealed Gage							
	Over Pressure	2 Times Rated Pressure < 35 BAR (508 PSI), 1.5 Times Rated Pressure ≥ 35 BAR (508 PSI), Max. Pressure 350 BAR (5076 PSI)							
	Burst Pressure	3 Times Rated Pressure Max. Pressure: 350 BAR (5076 PSI)							
	Pressure Media	Most Conductive Liquids and Gases				Any Liquid or Gas Compatible With 15-5 PH and 316 SS			
	Rated Electrical Excitation	8 - 16 VDC							
	Maximum Electrical Current	10 mA (Max.)							
	RTD Excitation	0.3mA (1mA Max.)							
OUTPUT	RTD	1000 Ohms Platinum, DIN EN 60751 Tables, Class A (65% Response Time 8.6 Seconds Max.) in Liquid							
	Output Impedance	5 Ohms (Typ.)							
	Full Scale Reading (X)	4.5V ± 50 mV (A)		4.9V ± 50 mV (B)		4.9V ± 50 mV (C)	4.5V ± 50 mV (D)	4.75V ± 50 mV (E)	
	Bandwidth (-3dB)	DC to 5 kHz							
	Residual Unbalance (X)	500 ± 50 mV (A)		350 ± 50 mV (B)		300 ± 50 mV (C)	150 ± 50 mV (D)	300 ± 50 mV (E)	
	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.25% FSO (Max.)							
	Resolution	Infinitesimal							
	Acceleration Sensitivity % FS/g Perpendicular	$6.5x10^{-4}$	$2.3x10^{-4}$	$1.4x10^{-4}$	$1.1x10^{-4}$	$3.6x10^{-5}$	$2.5x10^{-5}$	$1.9x10^{-5}$	$1.5x10^{-5}$
	Insulation Resistance	> 100 Megohm Min. @ 50 VDC							
ENVIRONMENTAL	Operating Temperature Range	-4°F to +392°F (-20°C to +200°C)							
	Compensated Temperature Range	+68°F to +392°F (+20°C to +200°C)							
	Total Error Band (Excluding End Points)	± 1.5% FS/100°F ≤ 217.5 PSI (15 BAR), ± .75% FS/100°F ≥ 217.5 PSI (15 BAR)							
	Linear Vibration	20g Peak, Sine 10 to 2000 Hz							
	Mechanical Shock	20g Half Sine Wave 11 msec. Duration							
PHYSICAL	Electrical Connection	5 Conductor 26 AWG Cable 1 Meter Long							
	Weight	10 Grams (Max.) Excluding Cable							
	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon							
	Mounting Torque	See Table							

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (H) Continuous development and refinement of our products may result in specification changes without notice. *Copyright © 2016 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.

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