



CHT-19FS Series 19mm Diameter, Flush Surface mV Output, Temperature Compensated IABP Medical Pressure Sensor

DESCRIPTION

Advanced Sensor Ceramic Hybrid Technology (CHT) 19mm Flush Surface (19FS) Series is a temperature compensated; high output sensor housed in a stainless steel 19mm Flush Surface package. The Ceramic Hybrid Technology contains a high output silicon MEMS pressure sensor bound to a ceramic substrate containing thick film resistors that are uniquely laser trimmed based on the sensors' individual sensitivity and thermal error. Incorporating a design that resembles Honeywell Model AB HP series, the sensor incorporates a Molex connector and reference vent tube termination. The CHT-19FS series is powered using a constant voltage and designed with a normalized 100mV output to ensure sensor field interchangeability. The CHT series superior die performance, coupled with rugged ceramic substrate ensures long term stability with superior temperature performance over a wide operating range. Product is certified ROHS 3 compliant.

APPLICATIONS

- Medical Instrumentation
- Intra-Aorta Balloon Pump (IABP)

FEATURES

- Calibrated Output
- Constant Voltage
- Molex C-Grid Termination
- Gel or Parylene Coated Options for Moisture Resistance
- Wide Selection of Pressure Range
- Temperature Compensated
- 19mm Stainless, Flush Surface
- ROHS Certified

SPECIFICATIONS

SPECIFICATIONS	Production Tested	Min	Typical	Max	Unit	Note
Performance Characteristic						1
Supply Voltage		4.95	5.0	5.05	V	
Operating Pressure		-4		6	FSS	
Bridge Resistance, Input & Output	100%	1250		6100	Ω	
Zero Pressure Offset	100%	-2.5	± 0.75	+2.5	mV	
Pressure Non Linearity	100%	-	± 0.25		%FSS	2
Accuracy	100%	-1.0	± 0.5	+1.0	%FSS	3
Full Scale Span (FSS)	100%	99		101	mV	
Response Time			<100		μ S	
Thermal Error of Span	100%	-1.0		+1.0	%FSS	4
Thermal Error of Offset	100%	-1.0		+1.0	%FSS	4
Weight			60		grams	
Compensated Temperature			32 to 120		$^{\circ}$ F	
Operating Temperatures			-40 to 120		$^{\circ}$ F	

SPECIFICATIONS	Symbol	Min	Typical	Max	Unit	Note
Absolute Maximum Conditions						8
Supply Voltage				10	V	
Storage Temperature		-40		165	°F	
Overage Pressure				5x	Range	5
Proof Pressure				3X	Range	6
Pressure Cycle Life		10			Million	
Media Compatibility		Non Ionic Gases with Moisture				7
Wetted Materials		Stainless Steel (300 Series), RTV, Silicon, Gold, Aluminum, Palladium Silver, Glass, Kovar, Silicon Gel				

Reference Conditions: V_{supply}: 5.00 ±0.05V, T_a=25 °C.

1. All specification at reference conditions unless otherwise noted. Output is ratio metric to supply voltage.
2. ½ Terminal Base Non-Linearity (Measured at 0, 50% and 100% FS).
3. Combined Error of Non-Linearity, Hysteresis, Repeatability, and Long Term Stability
4. Deviation per 100 ° F within compensated temperature range expressed as percentage of FSS at 25 °C.
5. Burst Pressure: The maximum pressure that can be applied to a sensor without rupture of either the sensing element or product housing.
6. The maximum pressure that can be applied without changing the sensor performance or accuracy.
7. The Transducers sensing area shall be submersible in water to a maximum of 6 PSIG for two hours and continue to function within it's specification (Wet Condition)
8. Exceeding Absolute Maximum Specification may damage the device. Extended exposure beyond the operating conditions may affect device reliability.

PART NUMBERING FOR ORDERS

Series	Port Style	Pressure Range	Pressure Units	Pressure Type (Range Availability) [Package Availability]	Wire Termination	Option
CHT-	19FS= 19mm Flush Surface	001 005 015 030	P=PSI	G=Gauge (All Ranges)	MX= Molex	-GC Gel Coated -PC Parylene Coated

Part Number Example: CHT-19FS005PGMX-

CHT-19FSeries, 19mm Flush Surface, 0-5 PSI Gage, Molex Termination, No Coating

WARRANTY

Pressure sensors have a limited one-year warranty to the original purchaser. AVSensors will repair or replace, at its option, without charge those items it finds defective. This is the buyers sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall AVSensors be liable for consequential, special, or indirect damages. This warranty does not apply to units that have been modified, misused, neglected or installed where the application exceeds published ratings. Specifications may change without notice. The information supplied is believed to be accurate and reliable as of this printing, however, we assume no responsibility for its use.