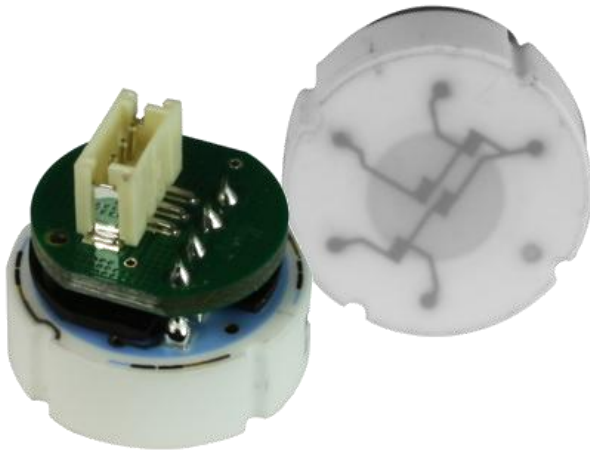


## CPA 502

### Piezoresistive ceramic pressure sensor with flush membrane

- Digital calibrated
- Ratiometric output signal (0.5 to 4.5 V)
- Excellent chemical resistance
- Easy mounting
- Pressure ranges  
7,5 to 750 psi gauge, absolute  
1500 to 9000 psi sealed gauge



#### Standard Pressure Ranges

PSI <sup>1)</sup>	bar	Proof pressure		Admissible negative pressure		Burst pressure		Output signal (FSO) [V]	Sensor thickness [mm]
		[PSI <sup>1)</sup> /bar]	[PSI <sup>1)</sup> /bar]	[PSI <sup>1)</sup> /bar]	[PSI <sup>1)</sup> /bar]	[PSI <sup>1)</sup> /bar]	[PSI <sup>1)</sup> /bar]		
7.5 <sup>2)</sup>	0.5 <sup>2)</sup>	15	1	-2	-0.15	30	2	0.5 to 4.5 V (@ V <sub>s</sub> = 5 V <sub>DC</sub> )	6.13
15	1	30	2	-3	-0.20	45	3		6.20
30	2	60	4	-6	-0.40	90	6		6.25
75	5	150	10	-11,5	-0.80	180	12		6.30
150	10	225	15	vacuum resistant		300	20		6.35
300	20	525	35			750	50		6.55
750	50	1500	100			1800	120		6.70
1500 <sup>3)</sup>	100 <sup>3)</sup>	2250	150			3000	200		6.70
3000 <sup>3)</sup>	200 <sup>3)</sup>	5250	350			7500	500		7.05
6000 <sup>3)</sup>	400 <sup>3)</sup>	7500	500			9750	650		7.35
9000 <sup>3)</sup>	600 <sup>3)</sup>	11250	750	14250	950	7.55			

#### Reference Conditions

Supply voltage	4.5 to 5.5 V
Output signal / Supply	3-wire ratiometric: 10 to 90% of V <sub>s</sub> (V <sub>0</sub> = 0.5 to 4.5 V <sub>DC</sub> @ V <sub>s</sub> = 5.0 V)
Reference temperature	25 °C
Measuring supply voltage	5 V <sub>DC</sub>
<b>Performance Characteristics</b>	
Supply current	≤ 2.5 mA
Offset	0.5 V @ V <sub>s</sub> = 5 V
Span	4.0 V @ V <sub>s</sub> = 5 V
Output load resistance	≥ 5 kΩ
Total error (Nonlinearity, hysteresis, nonrepeatability)	Pressure ranges: ≤ ± 0.4 % FS (terminal based)
Calibration error	≤ ± 0.3 %FS
Long term stability	≤ ± 0.3 % FS / year (at reference conditions)
TC Offset (TC0)	≤ ± 0.02 % FS/ °C <sup>4)</sup>
TC Span (TCS)	≤ - 0.013 % FS/ °C <sup>4)</sup>

<sup>1)</sup> PSI values around rounded and for reference only

<sup>2)</sup> only gauge available

<sup>3)</sup> only sealed gauge available

<sup>4)</sup> over compensated temperature range

# CPA-502

Ceramic pressure sensor

Specifications

Enviromental Specification				
Operating temperature range	- 40 to 85 °C			
Storage temperature range	- 40 to 100 °C			
Compensated temperature range	0 to 85 °C			
Electrical connections				
on PCB of sensor	Mates with JST socket parts: B3B-ZR-SM4-TF			
on connection wire	Connection housing: ZHR-3			
	Connection pin:	Applicable wire		
	Model No.	[mm <sup>2</sup> ]	AWG#	Insulation O.D.[mm]
	SZH-002T-P0.5	0.08 ~ 0.13	28 ~ 26	0.8 ~ 1.1
	SZH-003T-P0.5	0.032 ~ 0.08	32 ~ 28	0.5 ~ 0.9
Miscellaneous				
Material in contact with the media	Ceramic Al <sub>2</sub> O <sub>3</sub> 96 %			
Weight	approx. 9 g			
Dimensions	Ø = 18 ± 0.1 mm d = 6.13 to 7.55 ± 0.1 (excl. signal conditioning board)			
Mechanical				
Drawing		Pinout information		
		<p>JST socket B3B-ZR-SM4-TF</p> <p>Pin Out 1: +5 V 2: GND 3: signal</p>		

Ordering code				
CPA502		-		
Type of pressure	absolute A gauge G sealed gauge S			
Pressure range	7.5 psi / (only gauge) 0.5 bar 15 psi / 1 bar 30 psi / 2 bar 75 psi / 5 bar 150 psi / 10 bar 300 psi / 20 bar 750 psi / 50 bar 1500 psi / (only sealed gauge) 100 bar 3000 psi / (only sealed gauge) 200 bar 6000 psi / (only sealed gauge) 400 bar 9000 psi / (only sealed gauge) 600 bar	L 7 5 0 1 5 0 3 0 0 7 5 1 5 0 3 0 0 7 5 0 1 K 5 3 K 0 6 K 0 9 K 0		
Electrical connection	JST socket Others – on request	3 0 1 9 9 9		
Options	Standard		0 0 1	

This data sheet contains product specification, properties are not guaranteed. Subject to be changed without notice.