

MCS (Metal Coalesce System) represents a world-class innovative high-end pressure sensor technology originally created by Xi'an Chinastar M&C for over 10 years. Chinastar owns the complete independent intellectual property rights and knowhow technology.



## MCS Pressure Sensor & Transmitter

China's Original Technology

100% Domestic

100% Independent Intellectual Property Rights



Chinese  
Invention Patent



American  
Invention Patent



Chinese  
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XI'AN CHINASTAR M&C LIMITED

# MCS19 Pressure Sensor

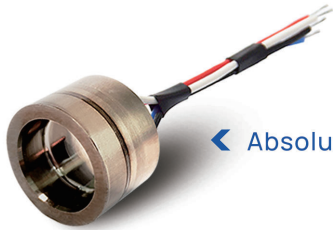
Pioneering High-end Industrial Pressure Sensor Technology



Invention Patents



Utility Model Patents



← Absolute, Sealed Gauge



← Gauge

- ✓ **Wide Temperature Range**  
 Operation Temperature: **-65°C~180°C(-85°F~356°F)**
- ✓ **High Precision**  
 Non-linearity: (±0.5%, ±0.25%, ±0.1%, ±0.05%)F.S.  
 Hysteresis: (±0.05%, ±0.02%, ±0.01%)F.S.  
 Repeatability: (±0.05%, ±0.02%, ±0.01%)F.S.
- ✓ **Stability & Reliability**  
 Long-term Stability: ≤±0.1%F.S./Y, ≤±0.05%F.S./Y
- ✓ **T.C. Zero & Span**  
 T.C. Zero (Compensated): 0.0025%F.S./°C  
 T.C. Span (Compensated): 0.0025%F.S./°C
- ✓ **High Burst Pressure**  
 Burst Pressure: ≥3...20X (< Material strength limit)

## Application

- Aviation
- Space Flight
- Pressure Measurement
- Petrochemical Industry
- Marine
- High-speed Train
- Semiconductor Equipment

## Parameter

Parameters	Specifications	Parameters	Specifications
Range	-0.1~0~0.1...200MPa -15 ~0~-15 ...29000 psi	Long-term Stability	≤±0.1%F.S./Y, ≤±0.05%F.S./Y
Overload Pressure	1.2X~2X	Insulation Resistance	≥1GΩ@250VDC
Burst pressure	≥3...20X (< Material strength limit)	Electric Strength	≥250VAC, 500VAC, ≥900VAC
Operating Voltage	2~10Vdc	Input/Output Impedance	800Ω~1800Ω
Zero Output	≤±0.5mV/V	Response Frequency	1kHz
Sensitivity Output	0.8~2.5mV/V	Pressure Cycle Life	10° Cycles(@25°C)(@77°F)
Non-linearity	(±0.5%, ±0.25%, ±0.1%, ±0.05%)F.S.	Contact Material	17-4PH, TC6, 316L, C276
Hysteresis	(±0.05%, ±0.02%, ±0.01%)F.S.	Measuring Medium	Fluid compatible with 17-4PH, TC6, 316L, C276
Repeatability	(±0.05%, ±0.02%, ±0.01%)F.S.		

Parameters	Specifications
Operation Temperature	-45°C~85°C(-49°F~185°F), -65°C~130°C(-85°F~266°F), -65°C~180°C(-85°F~356°F)
Compensation Temperature	-45°C~85°C(49°F~185°F), -65°C~130°C(-85°F~266°F)
T.C. Zero (Compensated)	0.01%F.S./°C, 0.005%F.S./°C, 0.0025%F.S./°C
T.C. Span (Compensated)	0.01%F.S./°C, 0.005%F.S./°C, 0.0025%F.S./°C
Dimension and Weight	Gauge Pressure Type: Ø19×H7, 8g
	Absolute Pressure/Sealed Gauge Pressure Type: Ø19×H12, 13g




# CS-GU27 Pressure Sensor








MCS19 Pressure Sensor Inside



- ✔ **High Accuracy in Full Temperature Range**  
 Accuracy @-40°C~-85°C(-40°F~185°F) : (±0.5%, ±0.2%, ±0.1%, ±0.05%) F.S.
- ✔ **Stability & Reliability**  
 Long-term Stability: ≤±0.1%F.S./Y
- ✔ **Full Welded, No Sealing Ring**
- ✔ **Oil-free, No Risk of Oil Leakage**
- ✔ **High Burst Pressure**  
 Burst Pressure: ≥3X~10X (< Material strength limit)
- ✔ **Reverse Voltage Protection**

## Application

-  High -precision fluid measurement in the high -end manufacturing field
-  High -precision hydraulic lubrication system
-  Flow measurement in wide -temperature range & harsh environments

-  Aviation
-  Space Flight
-  Marine
-  High-speed Train
-  Pressure Measurement
-  Semiconductor Equipment
-  Petrochemical Industry

## Parameter

Parameters	Specifications	Parameters	Specifications
Range	-0.1~0~0.1~2.5...50MPa (G/A)	Response Time	(10% ~ 90%) ≤10ms
	-15~0~15~370...7250psi (G/A)	Insulation Resistance	≥100MΩ@250VDC
Overload Pressure	1.5X	Protection Grade	IP67
Burst Pressure	≥3X~10X(< Material strength limit)		
Accuracy	I : (±0.5%, ±0.2%, ±0.1%, ±0.05%)F.S. @15°C~35°C(59°F~95°F)		
	II : (±0.5%, ±0.2%, ±0.1%) F.S. @-40°C~-85°C(-40°F~185°F)		
Output Signal	RS485	1~5V	4~20mA
Power Supply	10~30VDC	24VDC	
Operation Temperature	-40°C~85°C(-40°F~185°F)		
Expanded Operation Temperature	-45°C~125°C(-49°F~257°F)		
Storage Temperature	-50°C~125°C(-58°F~257°F)		
Long-term Stability	≤±0.1%F.S./Y		
		Pressure Connector	G1/4 External thread
		Electrical Connector	M12
		Measuring Medium	Range≥2.5MPa(363psi): Fluid compatible with 17-4PH Range < 2.5MPa(363psi): Fluid compatible with 316L, TC6
		Dimensions	Ø26.8xH82

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[Corporate Vision] To Be An Influential And Innovative Enterprise  
In Global Sensor Field




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