

MDM291 bar



- Pressure range: Obar~0.35bar...20bar
- Constant current or Constant voltage power supply for . option
- No O-rings, all welding construction, possible for various fluid media
- Stainless steel 316L
- High static pressure 200bar
- Wide temperature compensation: 0°C ~70°C
- Pressure port (optional)
- 2 times overpressure

APPLICATION

- Industrial process control
- Differential pressure measurement
- Gas, Liquid pressure measure
- Pressure checking meter •
- Pressure calibrator
- Ventura and Eddy-current flow meter

ELECTRICAL PERFORMANCE

Power supply	≤2.0mA DC		
Electrical connection	100mm silicon rubber flexible wire		
Common mode voltage output	50% of input (typ.)		
Input impedance	2kΩ~8kΩ		
Output impedance	3.5kΩ~6kΩ		
Response (10%~90%)	<1ms		
Insulation resistor	100MΩ@100V DC		
Max static pressure	200bar		
Zero drift or Static pressure	≤0.05mV/bar		

ENVIRONMENTAL CONDITIONS

Shock	No change at 10gRMS,(20~2000)Hz			
Impact	100g, 11ms			
Media compatibility	Gas or Liquid that is compatible with stainless steel			



SENSORS & CONTROLS

MDM291 welded differential pressure sensor is an OEM differential pressure measuring element using stainless steel isolated diaphragm, all welding construction and having no O-rings. It has unified construction, high static pressure, good stability and reliability. The high and low pressure sides are both protected by isolated diaphragm and welded with male screw thread pressure port, therefore the two pressure sides are both possible to corrosive and conductive liquid media. The measured pressure is transmitted onto the die through isolated diaphragm and filling silicon oil. The sensor element chooses high accuracy and high stability silicon die. It achieves precise differential pressure measurement. The transducer is produced in advanced production line, through automatic computer testing and temperature compensation, so it has good temperature feature. It can be widely used in industrial process control field etc. for differential pressure measurement.

CONSTRUCTION PERFORMANCE

Diaphragm	Stainless steel 316L
Housing	Stainless steel 316L
Leading wire	Silicon rubber flexible wire
O-ring	FKM
Net weight	~355g

BASIC CONDITIONS

Media temperature	(35±1)°C		
Environment temperature	(35±1)°C		
Shock	0.1g (1m/s²) Max.		
Humidity	(50±10)%RH		
Local air pressure	(0.86 ~ 1.06)bar		
Power supply	(1.5±0.0015)mA DC		







SPECIFICATION

Item*	Min.	Тур.	Max.	Units	
Linearity		±0.15	±0.25	%FS,BFSL	
Repeatability		±0.05	±0.075	%FS	
Hysteresis		±0.05	±0.075	%FS	
Zero output			±2.0	mV DC	
Output/Span**	70			mV DC	
Zero thermal error***		±0.75	±1.0	%FS, @35°C	
Span thermal error***		±0.75	±1.0	%FS, @35°C	
Compensated temp. range	0~70 °C				
Working temp. range	-40 ~ 125 °C				
Storage temp. range	-40 ~ 125 °C				
Long-term stability		±0.3	±0.5	%FS/Year	
*testing at basic condition				·	

**Output/Span=full scale output - zero point

***Code 0A :Max. Zero and FS thermal Error: ±1%FS(@35°C)

OUTLINE CONSTRUCTION (UNIT:mm)



ELECTRICAL CONNECTION



Wire color	Definition		
Black	+IN		
Yellow	-IN		
Red	+OUT		
Blue	-OUT		

The actual electrical connection method, please check the parameter label enclosed with products.



ORDER GUIDE

MDM291		Welded Differential Pressure Sensor							
	Range Code		Pressure range				Range Code	Pressure range	
	0A		0bar~0.35bar				08	0bar~3.5bar	
	02	0bar~0.70bar				09	0bar~7bar		
	03		0bar~1bar				10	0bar~10bar	
	07		0bar~2bar				12	0bar~20bar	
		Code	Compensation						
		L	Laser Trimming						
		М	Outer	Outer compensated resistor (providing resistor value)				alue)	
				Code Electri			al connection		
				2* 100m			ו silicon rubber flexible wires		
				Code		de Pr	ressure connection		
				Null		ill No	o pressure port and electric connection port		
				C1 M		L M2	20×1.5 male, face type seal		
				C2 G		2 G1	1/4 male		
			C3 (3 G1	1/2 male			
				C4		4 G1	1/4 female		
MDM291	12	L	2	2	С	2		the whole spec	
*The default wire (original	code for electrical code "2"). The wi	connection	is "1"on all be as	the para	ameter (tomers'	card. And request c	it is also allowed	to print code "1" if the electrical connection is flexible	

Notes:

- 1. The default unit of the company's products is kPa, 1kPa=0.01bar.
- 2. High pressure side and Low pressure side are marked "H" and "L" on the body.
- 3. During application, the pressure on the high side should not be lower than the low side.
- 4. Please protect the diaphragm to prevent any damage.
- 5. Please do not pull or drag the 6 leading wires.

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The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification. **Althen is the innovative sensor expert that creates integrated sensor and measurement solutions for the creators of tomorrow | althensensors.com** We create integrated sensor and measurement solutions. In addition we offer services such as calibration, repairs, design & engineering, training and renting of measurement equipment.

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