

Differential Pressure Transmitter for Oxygen-Measurement Industries

MDM4901FL



Applications

- Pharmaceutical industry
- Aerospace industry
- Firefighting industry
- Submarine

Features

- Reversed-polarity protection, transient overcurrent and overvoltage protection, conforming EMI protection requirements
- CE, RoHS, CCS approved for ship-use type

Introduction

MDM4901FL Differential Pressure Transmitter is dedicated to oxygen pressure measurement, filled with Fluorinated® oil, which has high precision, high stability and high safety level. It is widely used in the medical and pharmaceutical industries, specializing in gas pressure measurement in medical oxygen production equipment and oxygen storage tanks

Specifications

Range	0mbar ~ 350mbar...35bar
Overpressure	positive pressure: ≤ 2 times FS negative pressure is not allowed
Maximum Static Pressure	≤200bar
Pressure Type	differential pressure
Accuracy	±0.5%FS (static pressure effect: ±0.05%FS/1bar)
Long-term Stability	±0.5%FS/year (≤2bar)
	±0.2%FS/year (>2bar)
Application Temperature	-30°C ~ 80°C (B1 type, B4 type)
	-20°C ~ 70°C (B2 type, cable material: PE, PVC)
	-20°C ~ 80°C (B2 type, cable material: PUR)
Storage Temperature	-40°C ~ 120°C
	-20°C ~ 85°C (B2 type)
Vibration	10g, 30Hz ~ 2000Hz
Shock	100g, 11ms
Protection Rating	IP65
Weight	≤400g

Thermal Drift

Zero Thermal Drift	$\pm 0.03\%FS/^{\circ}C$ ($\leq 1\text{bar}$)
	$\pm 0.02\%FS/^{\circ}C$ ($> 1\text{bar}$)
Span Thermal Drift	$\pm 0.03\%FS/^{\circ}C$ ($\leq 1\text{bar}$)
	$\pm 0.02\%FS/^{\circ}C$ ($> 1\text{bar}$)

Output Signals

Output Signal	Power Supply	Output Format	Load Resistance
4mA~20mA DC (E)	15V~28V DC	2-wire	$\leq (U-15)/0.02(\Omega)$
0mA~10mA DC (Q)			
0mA~20mA DC (U)		3-wire	$> 100k\Omega$
0V~5V DC (J)			
1V~5V DC (F)			
0V~10V DC (V)			

Materials

Wetted Parts

Isolated Diaphragm: SS 316L

Pressure Port: SS 304/SS 316L

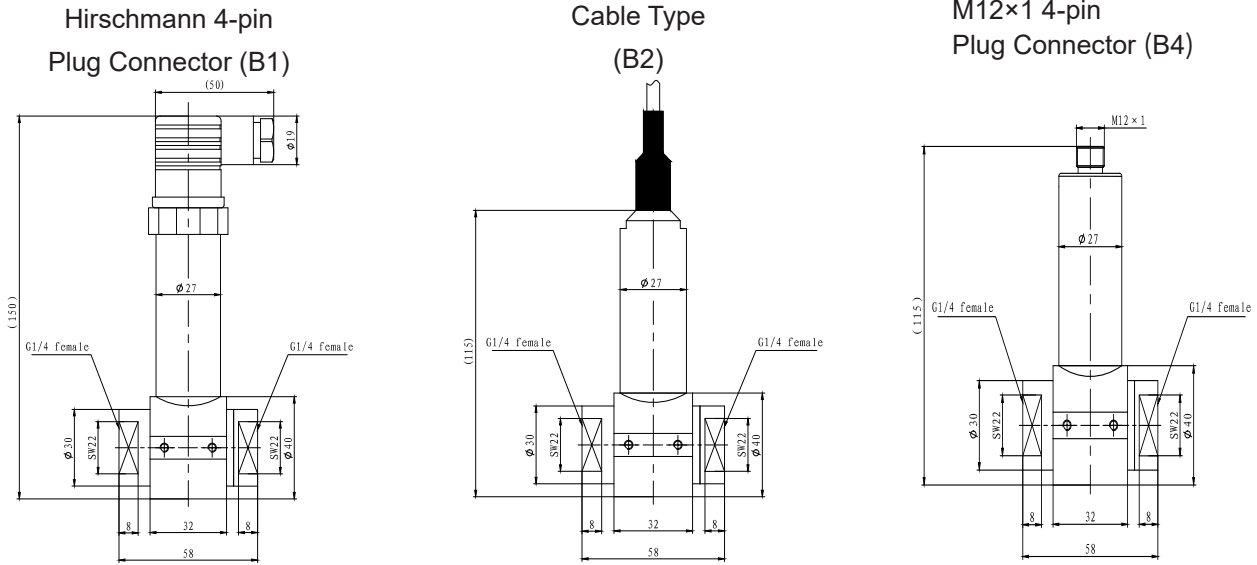
Non-wetted Parts

Housing: SS 304/SS 316L

Cable: PE/PUR/PVC

Outline Dimensions

unit: mm



Electrical Connection

	Hirschmann 4-pin Plug Connector (B1)		Cable (B2)		M12x1 4-pin Plug Connector (B4)	
Definition						
	current 2-wire	voltage 3-wire	current 2-wire	voltage 3-wire	current 2-wire	voltage 3-wire
+V	1	1	red	red	1	1
+OUT	2	3	black	white	3	3
GND	null	2	null	black	null	2

Ordering Guide

MDM4901FL	Differential Pressure Transmitter						
	Range	Measurement Range 0mbar ~ 350mbar...35bar					
	[0 ~ X]mbarL or barL	X: actual measured range, L means cable length when electrical connection is B2					
	Code	Output Signal					
	E	4mA~20mA DC					
	Q	0mA~10mA DC					
	U	0mA~20mA DC					
	J	0V~5V DC					
	F	1V~5V DC					
	V	0V~10V DC					
	Code	Material					
		Isolated Diaphragm	Pressure Port	Housing			
	22	SS 316L	SS 304	SS 304			
	24	SS 316L	SS 316L	SS 316L			
	Code	Process Connection					
	C4	G1/4 female					
	C8	NPT1/4 female					
	Code	Electrical Connection ^①					
	B1	4-pin plug connector					
	B2	cable connection					
	B4	M12×1 4-pin Plug Connector					
	Code	Accessory					
	null	no accessory					
	M6	4 digits LED digital indicator (only for 4mA ~ 20mA DC output products with B1 electrical connection)					
	M7	4 digits LCD digital indicator (only for 4mA ~ 20mA DC output products with B1 electrical connection)					
MDM4901FL	[0 ~ 16]bar	E	22	C4	B1	M6	Complete Type Specification

Ordering Notes

1. "①" for B1 or B4 electrical connection, please specify us in the order if cable is needed.
2. The cable length is 1.5m by default, cable material is available for 3 types, PE cable is provided as default. if other material is needed, please specify in the order.
3. When ordering the transmitter with M6 or M7 indicator, power supply should $\geq 20V$ DC.
4. Environmental temperature should be $-20^{\circ}C \sim 70^{\circ}C$ when ordering the transmitter with M6 indicator, environmental temperature should be $-10^{\circ}C \sim 60^{\circ}C$ when ordering the transmitter with M7 indicator, indicator setting can refer to our indicator lectotype, which can be found on our company's website.
5. In order to ensure the safe and reliable operation of the transmitter, it is recommended to install a three-valve group between the measured point and the transmitter to ensure that the medium under test is slowly and uniformly added to the positive and negative pressure chambers of the differential pressure transmitter.
6. Please notice the static pressure of the measured pressure point does not exceed 200bar when ordering, and the overpressure of the positive and negative pressure chambers of the transmitter cannot exceed the specified value of the product.
7. If there are other requirements, please contact us and specify it in the order.