MDM490 Piezoresistive Differential Pressure Transmitter

Features

·Full stainless steel construction, compact size, easy installation;

·Laser welding, full-sealed construction; protection IP65;

·Using piezoresistive differential pressure sensor,
316L isolated diaphragm;

·Temperature compensation and stable performance;

·Zero and span adjustable outside;

·Ex-proof version MDM490 conforms to GB3836.4
Exia Ⅱ CT6 standard; ex-proof certificate is approved;

·Ship-use product conforms to CCS Rules of Classification of Sea-going Steel Ships（2006）;
ship-use certificate is approved;

·CE and ROHS certificates

Introduction

MDM490 uses piezoresistive differential pressure sensor as sensing element. Silicon oil is filled in between die and two diaphragms, when measured differential pressure is added on two diaphragm, the pressure could be transferred onto die through silicon oil. Sensor die connects with amplifier circuit through wires, using semi-conductor's piezoresistive effect, transforming differential pressure signal into electric signal. The whole product is used for differential pressure measurement of petroleum, chemi-industry, power station and hydrology,etc.

Specification

Unit	Bar						Bar		
Measure range	0-0.35	0-0.70	0-1	0-2	0-3.5	0-7	0-10	0-20	0-35
+orvepressure	0.70	1.5	2	4	7	14	20	40	70
-overpressure	0.35	0.70	1	2	3.5	7	10	10	10
Max.static pressure	≤200Bar								

		Min.	Typ.	Max.	Unit
Accuracy			0.25	0.5	%FS
Zero Thermal error	0-1Bar		0.75	1.25	±%FS, @25C
	2-35Bar		0.5	0.75	
FS Thermal error	0-1Bar		0.75	1.25	
	2-35Bar		0.5	0.75	
Stability	≤2 Bar	0.5			%FS/year
	≤35 Bar	0.2			
Static pressure effect		0.05			±%FS, each 100kPa
Compensation temp.		0-50C			□
Operation temp.		-10-80C			
Storage temp.		-40-120C			

Electric Characteristic

Power supply: 2-wire 15-28VDC, 3-wire 15-28VDC

Output signal: 2-wire 4-20mA , 3-wire 0-5/10VDC

Electric connection:plug connection or Φ7.2mm 7-pin cable

Response time（10%-90%）: ≤1ms

Insulation resistor:100MΩ，50VDC

Construction Material

Housing: stainless steel

Diaphragm: stainless steel 316L

O-ring: Viton

Filled liquid: silicon oil

Pressure port: G1/4 female

Environment Condition

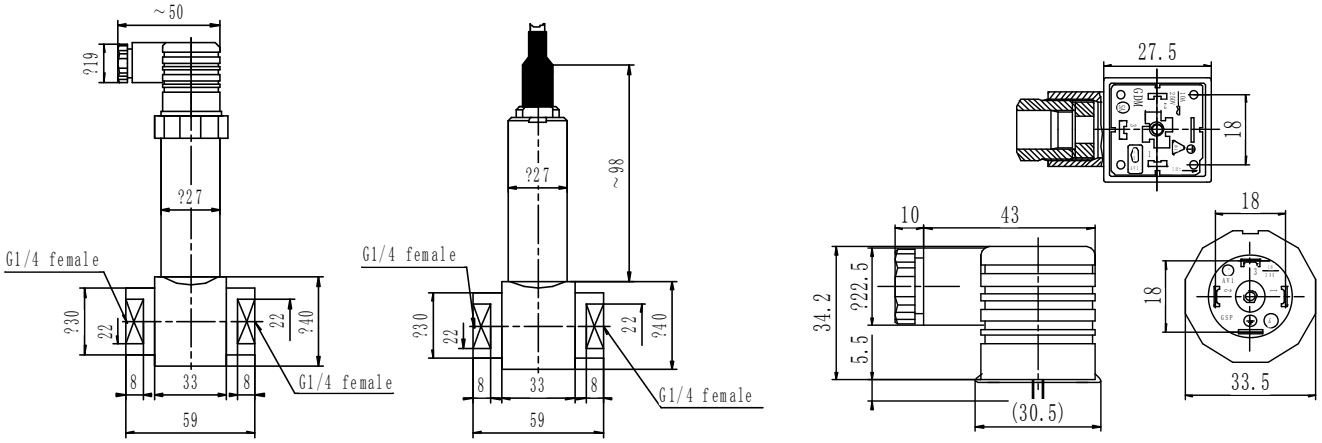
Shock effect: ≤1% at 3gRMS, 30-2000Hz

Impact: ≤1% at 100g, 10ms

Media: liquid or gas which ever is compatible with construction material

Outline Construction

（Unit: mm）



Electric Connection

Plug Connection

Pin	2-wire	3-wire
1	（+V）	（+V）
2	（+OUT）	（0V+/OUT）
3	Null	（GND）

Cable Connection

Wire color	2-wire	3-wire
Black	（+V）	（+V）
Red	（+OUT）	（0V/+OUT）
White	Null	（GND）

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