

HM31 Differential Pressure Transducer



● ● ● Overview of Product ● ● ●

HM31 differential pressure transducer adopts German HELM made differential pressure sensitive chip and special transducer integrated circuit as well as high – performance key set and strict production process to ensure that this series of product features superior performance, small dimensions, easy installation, which is best ideal for measurement of micro differential pressure, flow field, flow rate, and flow.

🔧 Technical Data

Measuring range	0~10KPa...2 MPa					
Full scale range	10~ 50KPa	50~100KPa	0.1~0.2MPa	0.2~0.5MPa	0.5~1MPa	1~2MPa
Positive permissible over pressure	250KPa	300KPa	0.4MPa	1.0MPa	2MPa	4MPa
Negative permissible over pressure	100KPa	200KPa	0.3MPa	0.5MPa	0.7MPa	1MPa
Maximun static pressure	≤20MPa					
Overall accuracy (Linear, repeatability, lagging)	±0.1%FS		±0.25%FS		± 0.4%FS	
Zero point temperature drifting	±0.02%FS/℃ (typical)			±0.05%FS/℃ (maximum)		
Sensitivity temperature drifting	±0.02%FS/℃ (typical)			±0.05%FS/℃ (maximum)		
Influence of static pressure	±0.05%FS/100KPa					
Range of operating temperature	-10~80℃					
Range of compensating temperature	-10~50℃					
Long-term stability	± 0.3%FS / year (≤200KPa)			± 0.1%FS / year (≥200KPa)		
Range of power supplying	12~36V DC (24V DC generally)					
Signal output	2-wire 4~20mA; s-wire 0 / 1-5V DC					
Response time	≤2 ms					
Insulation resistance	100MΩ, 500V DC					
Influence of vibration	Change ≤1% after vibration of 3gRMS30 ~ 2000Hz					
Impact	Change ≤1% after impact of 100g for 10ms					
Service life	1×10 ⁸ pressurized cycle					
Medium	The gas or liquid compatible with material of structure					
Explosion – proof marking	Ex ia II CT5 (intrinsically safe explosion – proof)					
Weight	Approx 0.35KG					
Thermal lagging	±0.1%FS (typical)					
Enclosure protection degree	Plug Type (IP 65); Cable Type (IP 67)					

●●● Application of Product ●●●

- ❖ High ratio of performance to cost
- ❖ Fully made of stainless steel with small dimensions, light weight, and easy installation
- ❖ Reliable and stable performance
- ❖ Range of differential pressure: 0 ~ 10KPa ... 2MPa
- ❖ Static high pressure resistant to 20MPa

●●● Features of Product ●●●

- ❖ Industrial process control
- ❖ Flow measurement
- ❖ Medical instrument
- ❖ Air power measurement
- ❖ Hydraulic and pneumatic equipment

Guideline of Selection

HM31	Differential Pressure Transducer				
Range	Measuring Range				
	0~X KPa or 0~X MPa				
	Code	Overall accuracy (linear + repeatability + lagging)			
	1	±0.4%FS			
	2	±0.25%FS			
	3	±0.1%FS			
	Code	Signal Output (standard power supply of energization)			
	A1	4~20mA (12~36V DC)			
	V1	1~5V DC (12~36V DC)			
	V2	0~5V DC (12~36V DC)			
	V3	0.5~4.5V DC (12~36V DC)			
	Code	Additional functions			
	F1	M20x1.5 external thread			
	F2	G1/4 internal thread			
	F0	Special			
W1	Cable type (IP67, 2m)				
W2	Socket type (IP65, DIN 43650)				
E	Intrinsically safe explosion - proof type Ex ia II CT5				
HM3 1 (0~50 KPa) —1 —A1 —F2 —W1 Differential Pressure Transducer					