

Model EPT3000 series

Smart Differential Pressure Transmitter
Monocrystalline silicon differential pressure sensor
Mass production, automated calibration

Materontek
Sensing and Internet of Things

Features

- ❑ The highest accuracy be $\pm 0.075\%$
- ❑ Excellent overvoltage performance
- ❑ Flexible range of compression Range ratio up to: 10:1
- ❑ Excellent operability & convenient use
- ❑ Five-digit LCD with backlight
- ❑ View of units (Pa, kPa, MPa, bar, mbar, %, psi, mmH₂O)
- ❑ Quickly adjusted through built-in three buttons

Application

- ❑ Be suitable to measure liquid, gas or steam flow as well
- ❑ Process control systems
- ❑ Chemical industry
- ❑ Energy industry
- ❑ Machine building



Technical data

Performance

Accuracy*	0.075%FS@25°C(Min.) 0.1%FS@25°C(Typ.)	*Linearity (best straight line) + Hysteresis + Repeatability
Operating Temperature	-40 to 85°C	
Storage temperature	-40 to 90°C	
Temp. coeff - Zero	$\pm(0.08\%\text{range}+0.055\%\text{ upper limit of range})$	
Temp. coeff - Span	$\pm(0.08\%\text{range}+0.055\%\text{ upper limit of range})$	
Vibration	20 g RMS(20 to 2000Hz)	
Shock	100 g(10ms)	
Cycles	10x10 ⁵	
Effect of overpressure	$\pm(0.065\%\text{upper limit of range})/5\text{MPa}$	
Long Term Stability	$\pm 0.05\%\text{upper limit of range/year}$	

Electrical @25°C

Output signal / Supply	2-wire 4...20mA+HART / V _S = 10.5... 40DC	*Intrinsic safety explosion-proof DC10.5~26V
Load resistance	250~600 DC 24V, include cable resistance	
Insulation Resistance	100 MΩ@100VDC	
Load capacity	0.55mF	
Load inductance	3.3mH	
Spacing above power line	15cm(please avoid parallel wiring)	
Saturation current	Upper limit 20.8mA, lower limit 3.8mA	
Adjustment function	The zero & full span point can be adjusted in situ through three-button from the top of the housing or be adjusted remotely through configuration software.	
EMC Test	IEC61000-6-2/IEC61000-6-3	
Effect of Power supply	$\pm 0.005\%/1\text{V}$	
Damp	The time constant can be adjusted from 0 to 99.9 seconds	
Reverse polarity protection	No damage – no function	

Physical Specifications

Housing	Low copper aluminum die casting + polyurethane coating
Diaphragm	SUS316LSS, Hastelloy C-276, Tantalum
Sealing	NBR or Viton O-ring
Oil Filling	Silicone oil
Protection	IP67
Weight	~4.2kg(without cable)

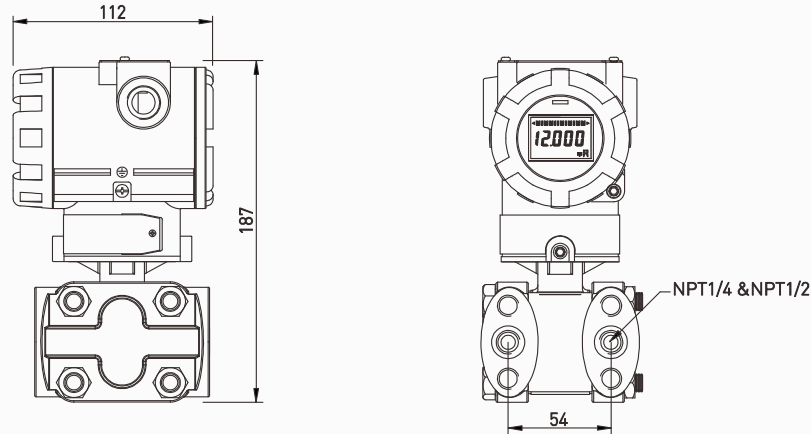
The listed specifications and dimensions are subject to change without prior notice

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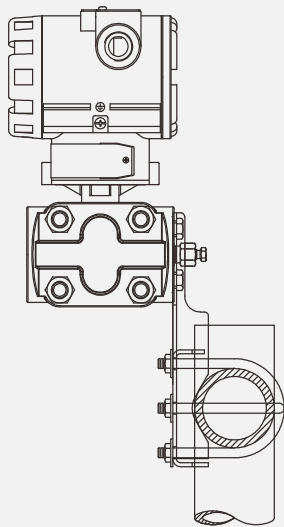
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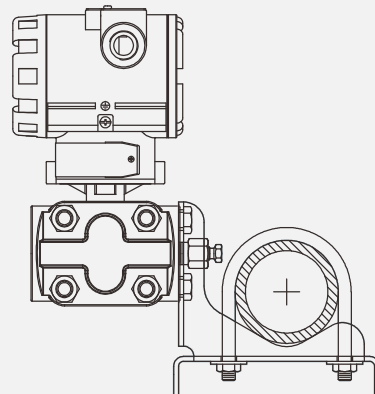
Dimensions (All dimensions in mm)



Code B1
Flat bracket



Code B2
Right angle bracket



Standard pressure range & URL

Code	Nominal pressure [bar]	Overpressure [bar]	Static pressure [bar]
S1	0...0.01	10	70
S2	0...0.06	160	250
S3	0...0.4	160	250
S4	0...1	160	250
S5	0...4	160	250
S6	0...10	160	250
S7	0...40	160	250
S8	0...100	160	250

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Ordering code

Model			
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Code	Pressure range		
S1	10 mbar		
S2	60 mbar		
S3	400 mbar		
S4	1 bar		
S5	4 bar		
S6	10 bar		
S7	40 bar		
S8	100 bar		
99	Customized range		
Code	Pressure Type		
D	Differential		
G	Gauge		
A	Absolute		
Code	Output signal		
A	4...20mA+HART Protocol		
B	RS485 Modbus RTU		
Code	Accuracy		
01	0.075%FS	URL>1mbar	
02	0.1%FS		
03	0.2%FS		
04	0.5%FS		
Code	Meterials		
	Membrane	Flange	Filled liquid
22	316LSS	316SS	Silicone oil
23	Hastelloy-C	316SS	Silicone oil
24	Tantalum	316SS	Silicone oil
25	316LSS gold plating	316SS	Silicone oil
26	316LSS	316SS	Fluorocarbon oil
27	Hastelloy-C	Hastelloy-C	Silicone oil
Code	Process connection		
D42	1/4-18NPT Female		
D43	1/2-14NPT Female		
D44	Customized		
Code	Electrical connection		
E1	M20x1.5		
E2	1/2"NPT		
Code	Meters		
M1	LCD display		
Code	Sealing meterials		
01	Fluororubber		
02	NBR		
Code	Mounting bracket		
B1	Flat bracket		
B2	Right angle bracket		
Code	Exlosion-proof		
N	No		
IA	Intrinsic safety and dust explosion-proof approval		
D	Flame-proof and dust explosion-proof approval		
Code	Label		
S	Standard		
N	Neutral packing		
C	Custom label		