

PRESSURE TRANSMITTERS

Pressure Measurement

SMART PRESSURE TRANSMITTER - KPT600DP

& Monitoring



DESCRIPTION

KPT600DP Smart Pressure Transmitter is a digital differential pressure transmitter designed for industrial pressure measurement applications. The KPT600DP can be configured to provide integrated solutions for a broad range of pressure and flow measurement applications.

TECHNICAL FEATURES

Process fluid	Liquid, Gas or Vapor
Application	Differential Pressure
Measuring range	0 - 0.16 kPa ~ 0 - 1.0 kPa (Minimum) 0 - 4.0 MPa ~ 0 - 20.0 MPa (Maximum)
Turndown ratio	100 : 1
Accuracy	0.1%
Stability	+/-0.2% of URL for 2 years
Working temperature	-25 to +95 °C
Max. pressure	40 MPa
Material	
- Flange / adapter	Stainless Steel 304 / Stainless Steel 316
- Drains / vents	Stainless Steel 304 / Stainless Steel 316
- Diaphragm	Stainless Steel 316L / Hastelloy B / Hastelloy C / Monel / Tantalum
- Wetted O-Ring	Buna N / Viton / PTFE
- Bolts & nuts	Carbon Steel / Stainless Steel 316
- Mounting bracket	Carbon steel / Stainless Steel 304 / 316
- Name / tag plate	Stainless Steel 304 / Stainless Steel 316
- Converter housing	Low copper cast aluminum alloy with polyurethane, light blue paint
- Fill fluid	Silicone / fluorine oil
Protection class	IP65 (Standard) Intrinsically Safe EEx ia IIC T5 (Standard) Explosion proof Ex D IIB T5

FEATURES

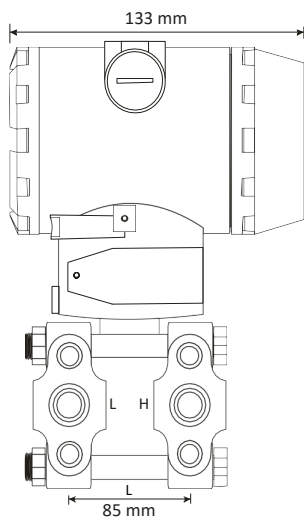
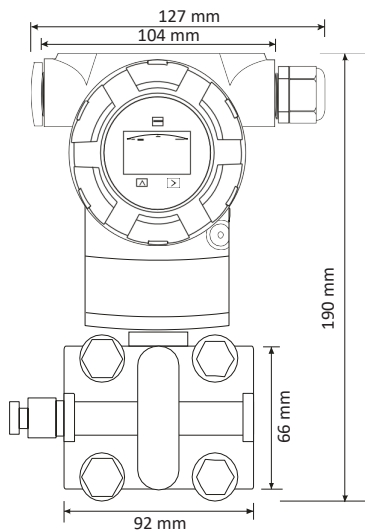
- ✓ Updating time of output current in 200 ms
- ✓ Improved performance, increased accuracy and greater stability
- ✓ Two years stability of 0.2%
- ✓ 0.2% accuracy
- ✓ 4-20 mA output plus direct digital HART communication
- ✓ Automatic zero calibration by simply pressing a button
- ✓ Explosion proof and weather proof

I-SYSTEM MEASUREMENT
www.ismesb.com



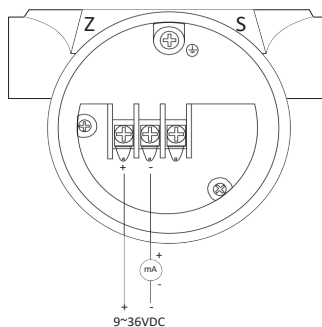
PRESSURE TRANSMITTERS
SMART PRESSURE TRANSMITTER - KPT600DP
10-2023 I-SYSTEM 301035

I-SYSTEM
301/035

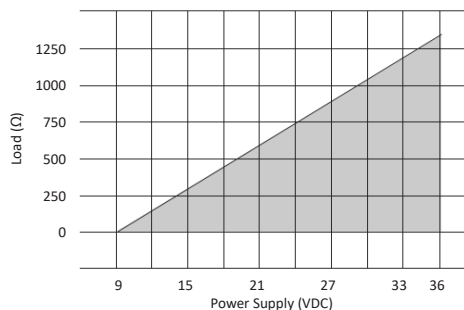


TECHNICAL FEATURES

Display	5 digits programmable & 0-100% bargraph
Display unit	Standard 22 different engineering unit 5 Digits programmable for special unit
Keypad	3 internal keys for programming and output setting
Current output	4 - 20 mA 2 wires with Hart signal (Compatible)
Load	$R_{ohm} = (V_{dc} - 9) * 50$
Power supply	9 - 36 VDC
Damping	0 - 32 seconds
Response time	200 mS
Mounting	Bracket on 2" pipe
Humidity limit	0 to 100% relative humidity
Turn on time	2 Seconds with minimum damping
Zero calibration	Automatic zero calibration by press-button
Cable entry	M20 conduit threads / 1/2" NPT (female)
Temperature effect	+/-0.18% ~ +/-0.5% of span per 20 °C
Vibration effect	+/-0.05% of URL per g to 200 Hz in any axis
EMI/RFI effect	Follow SAMA PMC 33.1 from 20 to 1000 MHz and for field strengths up to 30 V/m
Process connection	1/4" - 18 NPT 1/2" - 14 NPT (with adapter)
Ambient temperature	-25 to +80 °C
Dimensions	102 mm (W) x 188 mm (H) x 130 mm (D)
Weight	3.5 kg



Wiring Diagram



Supply Voltage VS Loop Load

I-SYSTEM MEASUREMENT
www.ismesb.com



PRESSURE TRANSMITTERS
SMART PRESSURE TRANSMITTER - KPT600DP
10-2023 I-SYSTEM 301035

I-SYSTEM
301/035

MEASURING RANGE

Range Code	Pressure Range						Pressure Transmitter		
	Unit	Low Range	High Range	Unit	Low Range	High Range	Differential	Gauge	Absolute
2	Kpa	0 - 0.16	0 - 1.0	mmH2O	0 - 16.32	0 - 102.0	✓	✓	
	mbar	0 - 1.6	0 - 10	InH2O	0 - 0.6423	0 - 4.015			
	psi	0 - 0.023	0 - 0.145	Kg/cm2	0 - 0.001	0 - 0.010			
3	Kpa	0 - 1.0	0 - 6.0	mmH2O	0 - 16.32	0 - 611.82	✓	✓	
	mbar	0 - 10	0 - 60	InH2O	0 - 4.015	0 - 24.088			
	psi	0 - 0.145	0 - 0.87	Kg/cm2	0 - 0.010	0 - 0.061			
4	Kpa	0 - 6.0	0 - 40	MH2O	0 - 611.82	0 - 4078	✓	✓	✓
	mbar	0 - 60	0 - 400	InH2O	0 - 24.088	0 - 160.6			
	psi	0 - 0.87	0 - 5.802	Kg/cm2	0 - 0.061	0 - 0.408			
5	Kpa	0 - 40	0 - 200	MH2O	0 - 4.079	0 - 20.39	✓	✓	✓
	mbar	0 - 400	0 - 2000	InH2O	0 - 160.6	0 - 802.9			
	psi	0 - 5.802	0 - 29.0	Kg/cm2	0 - 0.408	0 - 2.039			
6	Kpa	0 - 160	0 - 1000	MH2O	0 - 16.32	0 - 101.97	✓	✓	✓
	mbar	0 - 1.6	0 - 10	InH2O	0 - 642.3	0 - 4014			
	psi	0 - 23.21	0 - 145	Kg/cm2	0 - 1.632	0 - 10.197			
7	Kpa	0 - 400	0 - 2500	MH2O	0 - 40.79	0 - 254.9	✓	✓	✓
	mbar	0 - 4.0	0 - 25	InH2O	0 - 1605	0 - 10036			
	psi	0 - 58.02	0 - 362.6	Kg/cm2	0 - 4.079	0 - 25.49			
8	Kpa	0 - 1.6	0 - 8.0	MH2O	0 - 163.1	0 - 815.76		✓	
	mbar	0 - 16	0 - 80	InH2O	0 - 6423.4	0 - 32117			
	psi	0 - 232.1	0 - 1160.3	Kg/cm2	0 - 16.32	0 - 81.578			
9	Kpa	0 - 4.0	0 - 20	MH2O	0 - 407.9	0 - 2039.4		✓	
	mbar	0 - 40	0 - 200	InH2O	0 - 16059	0 - 80292.6			
	psi	0 - 580.2	0 - 2901	Kg/cm2	0 - 40.79	0 - 203.94			



MODEL SELECTION

Model	Differential Pressure Transmitter	KPT600DP	X	X	X	X	X	X	X	X	X	X
Measurement Range	0-0.1~1.5 kpa	2										
	0~7.5 kpa	3										
	0~37.4 kpa	4										
	0~186.8 kpa	5										
	0~690 kpa	6										
	0~2068 kpa	7										
	0~6890 kpa	8										
	0~20680 kpa	9										
Output	4-20mA, HART Protocol, Linear Output	S										
	4-20mA, HART Protocol, Square root Output (Range≥5kpa)	J										
Diaphragm Material / Fill Fluid	Stainless Steel 316L Silicone Oil	2										
	Hastelloy C (range>3Kpa) Silicone Oil	3										
	Tantalum (range>3Kpa) Silicone Oil	T										
	Stainless Steel 316L Fluorine Oil	A										
Drain Hole	Back of process flange or none					B						
	Process flange side upper					U						
	Process flange side lower					L						
Wetted O-Ring Material	Buna-N (NBR)						7					
	Viton (FKM) (Temperature ≥-20°C)						6					
	Low Temperature Viton (FKM-GFLT)						5					
Process Connection	1/4" NPT F							H				
	1/2" NPT F							F				
Maximum Pressure Limit	14 Mpa (4Mpa for range 2E 7Mpa for range 3E)								1			
	25 Mpa								3			
	32 Mpa								5			
Cable Entry	M20*1.5									1		
	1/2" NPT									2		
Mounting Bracket	None											B00
	Tube-type Curved Bracket (carbon steel)											B01
	Wall mounting bracket (carbon steel)											B02
	Tube-type Flat Bracket (carbon steel)											B03
	Tube-type Curved Bracket (stainless steel)											B04
	Wall mounting bracket (stainless steel)											B05
	Tube-type Flat Bracket (stainless steel)											B06
Optional	Intrinsically safe type, Flameproof (Exd IIC T4~T6)											d
	Intrinsically safe (Exia IIC T4~T6)											i
	LCD display											M3
	Stainless steel drain valve or screw (2pcs)											D1
	1/2" NPT female waist flange (2sets)											C1
	1/2" NPT-M20*1.5-Ø14 pressure pipe (2sets)											C12
	M20*1.5 male thread T joint (2sets)											C2
	M20*1.5 T joint -Ø14 Pressure pipe (2sets)											C21
Degreasing treatment											K1	

I-SYSTEM MEASUREMENT
www.ismesb.com



PRESSURE TRANSMITTERS
SMART PRESSURE TRANSMITTER - KPT600DP
10-2023 I-SYSTEM 301035

I-SYSTEM
301/035