



Smart Flange Pressure Level Transmitter Model AT3051LT Series

GENERAL

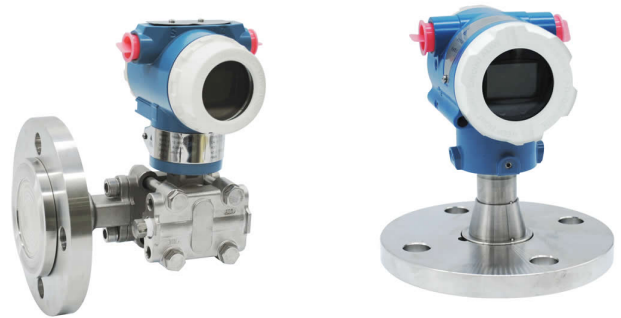
AT3051LT series is a digital flange pressure level transmitter designed for industrial level measurement applications. The AT3051LT can be configured to provide integrated solutions for a broad range of pressure and level measurement applications.

FEATURES

- Updating time of output current in 200 ms
- Improved performance, increased accuracy and greater stability
- Two years stability of 0.15%
- 0.1% accuracy
- Parameter setting by keypad directly
- 4-20 mA output plus direct digital HART communication
- Automatic zero calibration by push-button
- Explosion proof and weather proof housing

STANDARD SPECIFICATION

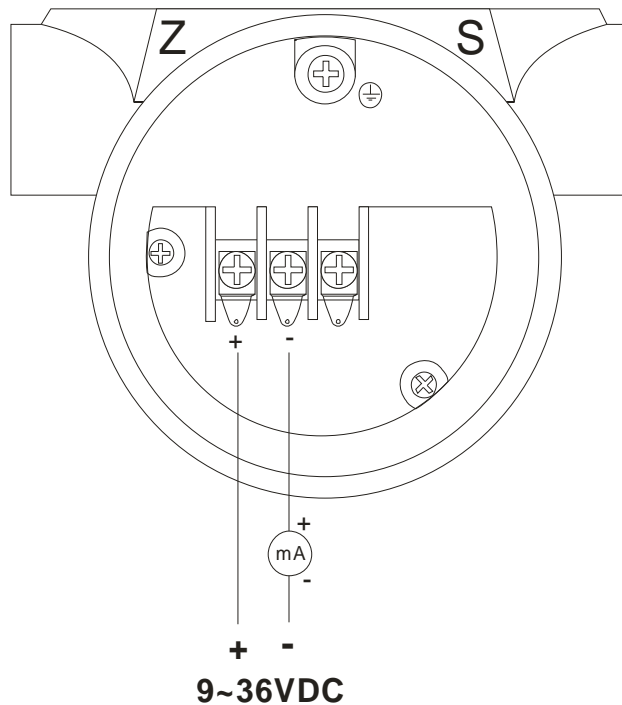
- Process Fluid : Liquid
- Application : Liquid Level, Differential Pressure, Gauge Pressure, Absolute Pressure
- Measuring Range : 0 - 6.0 kPa ~ 0 - 40 kPa (Minimum)
: 0 - 4.0 MPa ~ 0 - 10.0 MPa (Maximum)
- Accuracy : +/- 0.1% of span
- Stability : +/- 0.15% of URL for 2 years
- Working Temperature : -40 to +250 °C
- Max. Pressure : 10 MPa (Dependent on flange rating)
- Material
 - Flange/Adapter : Carbon Steel / Stainless Steel 304 /
: Stainless Steel 316
 - Diaphragm : Stainless Steel 316L / Hastelloy B /
Hastelloy C / Monel / Tantalum
 - Bolts & Nuts : Carbon Steel / Stainless Steel 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 / High Temperature Silicone
Fluorine Oil / Vegetable Oil
- Protection Class : IP67 (Standard)
: Intrinsically Safe EEx ia IIC T5 (Standard)
: Explosion proof Ex D IIB T5
- 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
- Digital Communication : Hart Protocol
- Damping : 0 - 32 seconds
- Response Time : 100 mS
- Turn on Time : 2 Seconds with minimum damping
- Zero Calibration : Automatic calibration by push-button
- Cable Entry : 1/2" NPT(Female) / M20 Conduit Threads
- Temperature Effect : +/- 0.18% ~ +/- 0.5% of span per 20 °C
- EMI/RFI Effect : Follow SAMA PMC 33.1 from 20 to 1000
MHz and for field strengths up to 30 V/m
- Process connection
 - High Pressure Side : 1-1/2", 2", 3", 4" Flanges
ANSI / DIN / JIS / Tri-Clamp
 - Extended Diaphragm : 2", 4", 6" length
 - Low Pressure Side : 1/4" - 18 NPT , 1/2" - 14 NPT
- Ambient Temperature : -25 to +85 °C
- Dimensions : 102 mm (W) * 188 mm (H) * 189 mm (D)
- Weight : 8 - 15 Kg



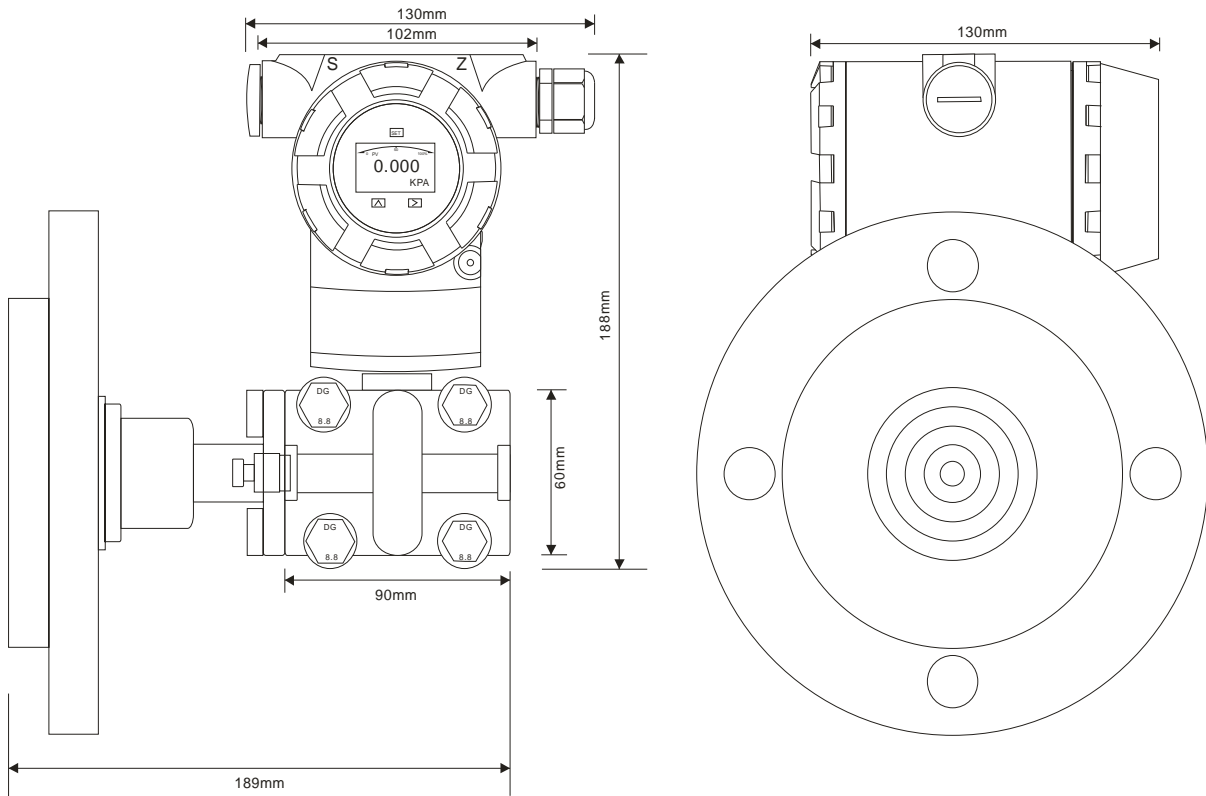
MEASURING RANGE

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

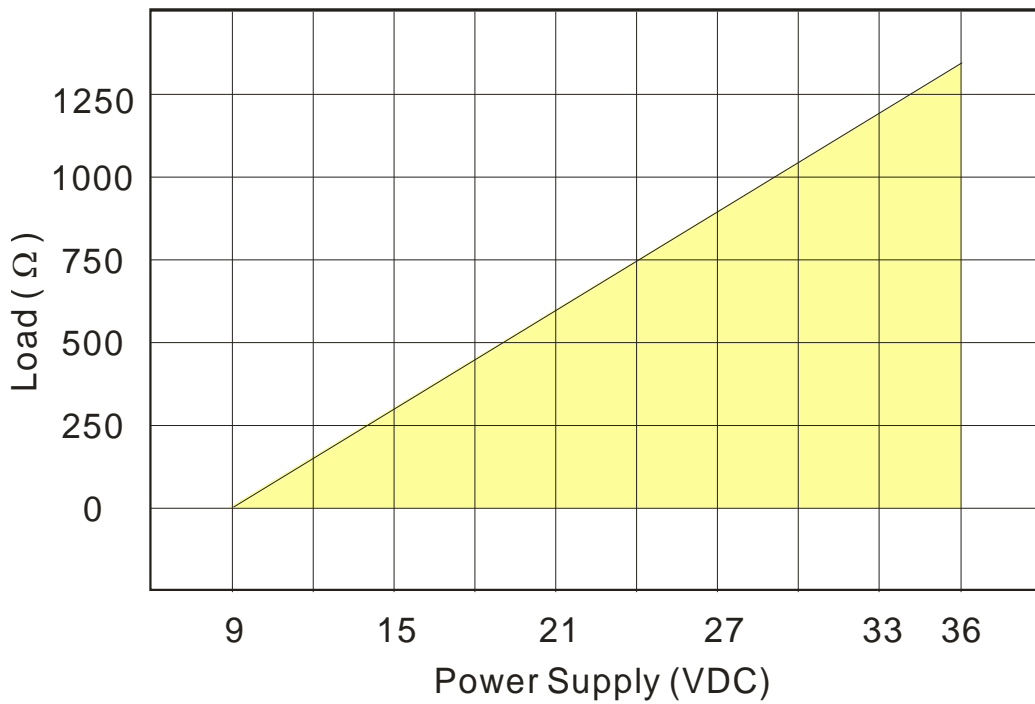
WIRING DIAGRAM



➤ DIMENSIONS



➤ Supply Voltage VS Loop Load



MODEL SELECTION GUIDE

AT3051LT Series												
Example: AT3051LT-4A30N-4NN-NN-EX/HT												
AT3051LT-	X	X	X	X	X	-X	X	X	-X	X	-XX	Description
Pressure Range	4											0 - 6.0 (0.4) kPa ... 0 - 40 kPa
	5											0 - 40 (2.0) kPa ... 0 - 200 kPa
	6											0 - 160 (10.0) kPa ... 0 - 1000 kPa
	7											0 - 400 (25.0) kPa ... 0 - 2500 kPa
	8											0 - 1.6 (0.08) MPa ... 0 - 8.0 MPa
	9											0 - 4.0 (0.20) MPa ... 0 - 20 MPa
Process Connection	1											PN10
	2											PN16
	3											PN25
	4											PN40
	A											ANSI 150#
	B											ANSI 300#
	J											JIS 10K
	K											JIS 20K
Z											Other	
Flange Rating	1											1-1/2" (Diaphragm Diameter If Extended: 38mm)
	2											2" (Diaphragm Diameter If Extended: 48mm)
	3											3" (Diaphragm Diameter If Extended: 66mm)
	4											4" (Diaphragm Diameter If Extended: 89mm)
Diaphragm Extension Length	0											Flush Diaphragm
	2											2" (50mm)
	4											4" (100mm)
	6											6" (150mm)
Diaphragm Material	N											Stainless Steel 316L
	B											Hastelloy B
	C											Hastelloy C
	T											Tantalum
Flange Material	-N											Carbon Steel
	-4											Stainless Steel 304
	-6S											Stainless Steel 316
Low Pressure Side Process Connection	N											1/4" - 18 NPT
	A											1/2" - 14 NPT(with Adapter)
	Z											Other
Bolts / Nuts Material	N											Carbon Steel
	S											Stainless Steel
Fill Fluid	-N											Silicone (Max. Temperature 130 °C)
	-S											HT Silicone (Max. Temperature 250 °C)
	-F											Fluorine (Max. Temperature 160 °C)
	-V											Vegetable Oil (Max. Temperature 130 °C)
Cable Entry	N											M20 Conduit Threads
	P											1/2" NPT (Female)
	Z											Other
Option	-NN											None
	-EX											Explosion Proof Ex D IIB T5
	-S6											Stainless Steel 316 Name Plate and Tag Plate
	-HT											Hart Signal (Compatible)
	-ZZ											Others