

Pressure Transmitter Data Sheet

Differential pressure transmitter

Model: CMPT124B-3501

Introduction

- ◆ CMPT124B-3501 differential pressure transmitter can be used to measure liquid, gas, or steam flow, as well as liquid level, density and pressure. It outputs a 4 to 20mA DC HART signal corresponding to the measured pressure differential.
- ◆ The model CMPT124B-3501 also features remote setup and monitoring through communication with the model RST375 TERMINAL or RSM100 Modem.



RoHS



Features:

- ◆ Adopts FST mono crystalline silicon MEMS chip to encapsulate
- ◆ Accuracy +/-0.075%, Error less than +/-0.1%/10MPa
- ◆ Advanced stability and static pressure performance
- ◆ Excellent overload performance
- ◆ Suitable for negative pressure measurement
- ◆ Intelligent static pressure and temperature compensation
- ◆ Internal integrated high sensitivity temperature transducer
- ◆ Perfect thermal drift
- ◆ All SS316L welding sealed construction with silicon filled
- ◆ Fast response time

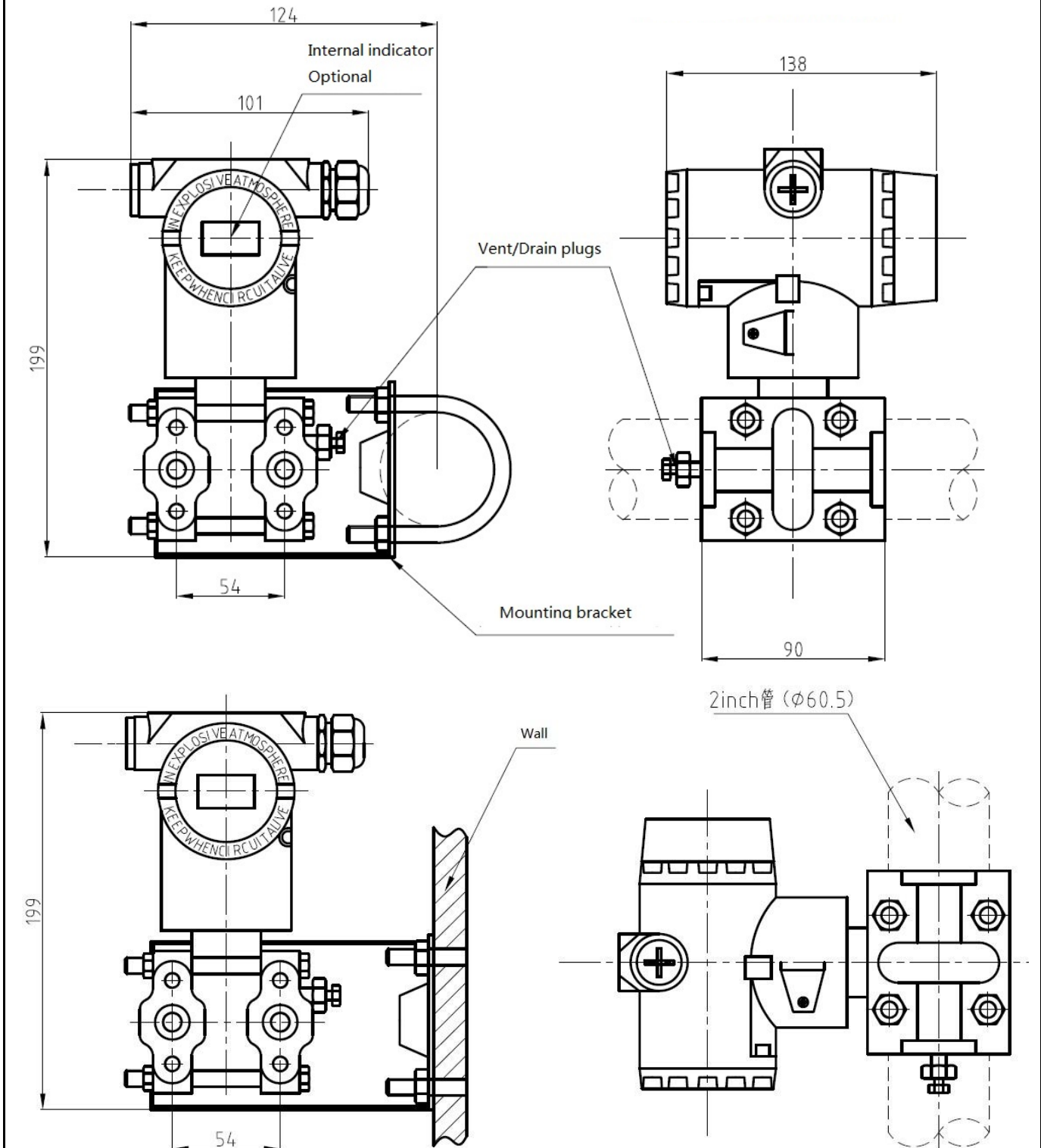
Technical Characteristics

Model	CMPT124B-3501
Medium	Gas, steam, liquid
Measurement range (Non migration)	0-0.1KPa-2MPa
Accuracy	+/-0.075%, +/-0.1%
Wetted parts material	SS316L, Hastelly C, Tantalum
Output	2-wire 4-20mA, HART communication optional, linear output or square root output available
Ambient Temperature	-40~85°C, -20~65°C (with LCD display, fluorine rubber O-ring)
Electric connection	M20*1.5 cable sealing buckle, terminal suitable for 0.5-2.5mm ² cable
Process connection	1/2NPT(F), 7/16 female on the cover flanges or other optional
Protection grade	IP67
Mounting position effect	Rotation in diaphragm plane has no effect. Tilting up to 90° will cause zero shift up to 0.4KPa, which can be corrected by the zero adjustment.

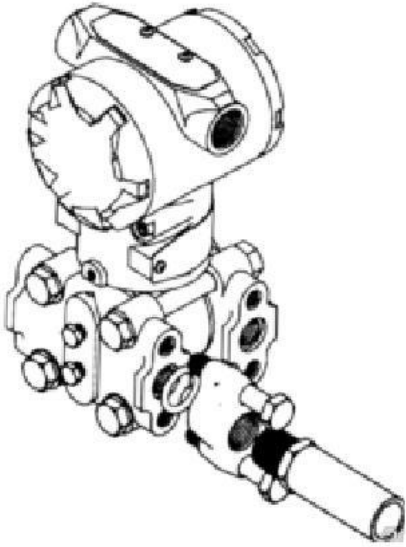
Dimensions and Installation

Horizontal tube connection (side face)

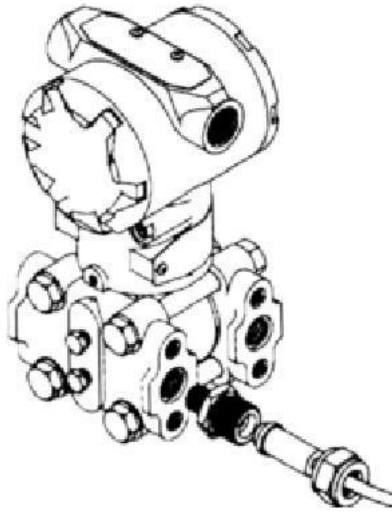
Horizontal tube connection (front)



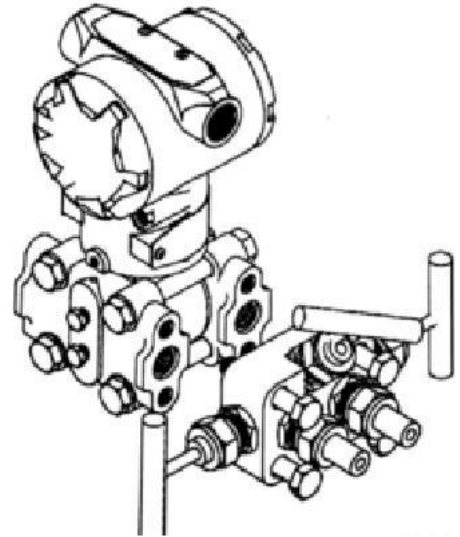
Installation Diagram



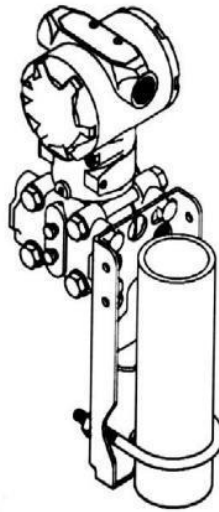
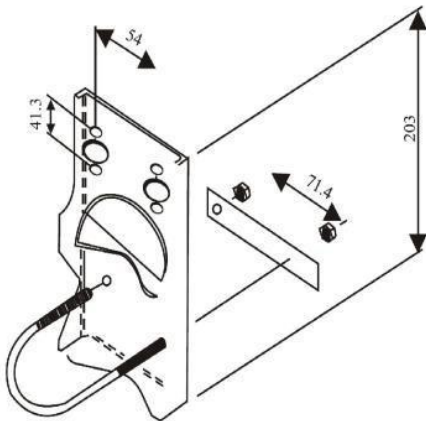
1/2NPT Female



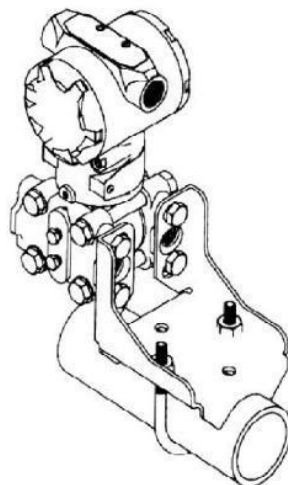
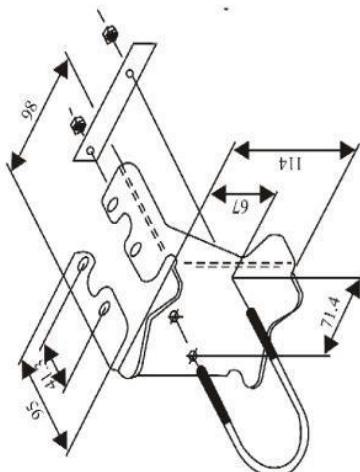
Welded Joint Connection



Three-valve Manifold Connection



Pipe mounted flat bracket



Pipe mounted bent bracket

Site installation schematic

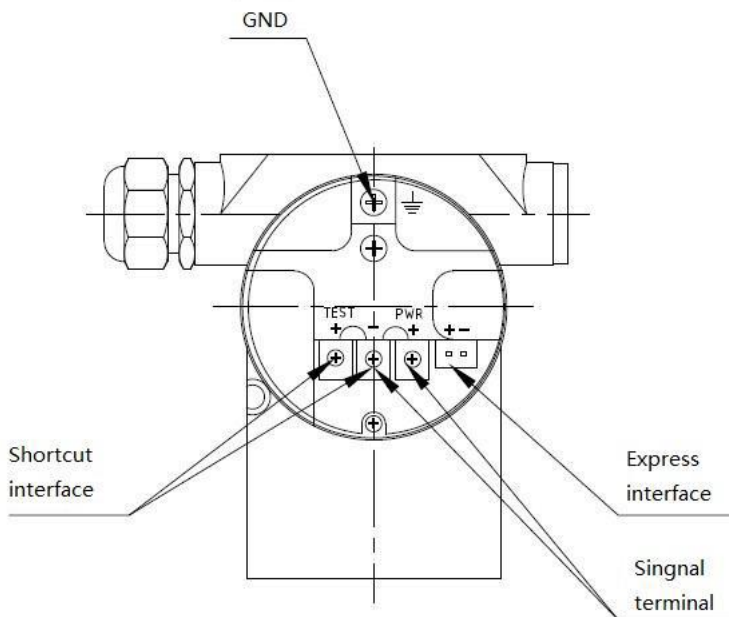


Tank Liquid Level Measurement



Pipe Differential Pressure Measurement

Wiring connector



PIN	2-wire	3-wire
PWR+	P+	P+
PWR-	P-	P-
TEST+		S-

Ordering Guide

Model	Range (bar)	Output	Screw Thread	Electric connection	Accuracy	Diameter (mm)	Other requirement
CMPT124B-3501	*	*	*	*	*	*	---

Example: CMPT124B-3501-10bar-4/20mA(HART)-1/2NPT-M20*1.5 cable sealed

Modify LCD display

Normally display, hold down press S key, switch among current, main variable and percentage, release when exist the required parameter; Now, it maybe change each 3s, while exist the undesired variable, please repeat the former operation again.

Menu 2: Modify the units

Normally display, hold down press Z key, and there will display "00000" twinkle in turn, while the rightmost 0 twinkle release the key, then press S key to change the digital to "00002", press M key, the low left quarter display "2". Each press S key, low right quarter unit will change, till the required unit exist, then press M key to save

Menu 3/4: Modify the range

Normally display, hold down press Z key, and there will display "00000"twinkle in turn, while the rightmost 0 twinkle release the key, then press S key to change the digital to "00003", press M key, the low left quarter display "3". Press S key, the leftmost arrow twinkle, press Z key to shift, and press S key to change the digital. When the rightmost digit twinkles, press Z, the decimal all bright, then press S key to choose the decimal place. Finished above and press M, save the data and auto shift to the upper range value. (Remarks: If you need not adjust the lower range value, press M key skip while into menu "3", directly into menu "4", it till show "4" at the low left quarter, repeat above operation, press M key to save after changed the digital

Menu 5: Modify the range

Normally display, hold down press Z key, and there will display "00000"twinkle in turn, while the rightmost 0 twinkle release the key, then press S key to change the digital to "00005", press M key, the low left quarter display "5", Press S key, the leftmost arrow twinkle, press Z key to shift, and press S key to change the digital. When the rightmost digit twinkles, press Z, the decimal all bright, then press S key to choose the decimal place. Finished above and press M, save the data and auto shift to Menu 6.

Menu 6: Main variable adjust zero

Normally display, hold down pressure Z key, and there will display "00000"twinkle in turn, while the rightmost 0 twinkle release the key, then press S key to change the digital to "00006", press M key, the low left quarter display "6", Press S key, low right quarter switch between "NO "and "YES", when display "YES", press M key to finish.

Menu 7: Shortcut Key:

Normally display, press M+Z key together, and keep 5s. while the low left quarter display “6”, other operation the same as above.

Menu 8: Output function

Normally display, hold down press Z key, and there will display “00000”twinkle in turn, while the rightmost 0 twinkle release the key, then press S key to change the digital to “00005”, press M key, the low left quarter display “5”, Press S key, the leftmost arrow twinkle, press Z key to shift, and press S key to change the digital. When the rightmost digit twinkles, press Z, the decimal all bright, then press S key to choose the decimal place. Finished above and press M, save the data and auto shift to Menu 6.

Menu 9/10: Calibrate upper-lower limit

Normally display, hold down press Z key, and there will display “00000”twinkle in turn, while the rightmost 0 twinkle release the key, then press S key to change the digital to “00009”, press M key, the low left quarter display “9”, Press S key, the leftmost arrow twinkle and into calibrate, add the upper limit pressure, press Z key to shift, and press S key to change the digital, When the rightmost digit twinkles, press Z, the decimal all bright, then press S key to choose the decimal place, and press M to save the data and shift to calibrated upper range. The moment, the low left quarter display “10”, add the lower limit pressure, repeat above operation, input the pressure and press M to save

Notice

The function require menu 9 and 10 calibrated at the same time, and the upper limit pressure should be different from the lower limit pressure!

MENU 11: Arbitrary point migration

Automatic enter after finished Menu 10, refer to the setting operation of Menu 9/10, set the required migration value (current pressure value), press M key to save the data.

Notice

1, In whichever of Menu 2-3-4-5-6-8, whenever you press M key, it will shift to next menu, it will save if there are changes. The next menu of Menu 8 is 0 means normally display; it will exit after 3s if there is no operation, and normal display. And it will re-circulate menu 2-3-4-5-6-8 if there is operation within 3s.

2, Menu 9-10-11 should operate by professionals, so it is not in the circulate above; only can enter from “00009”.