

DR3451 Pressure Transmitter Introduction

-Output RS485



The DR3451 is an intelligent pressure transmitter with output RS485 or 4-20mA. It built-in high-performance diffused silicon pressure sensor and high-performance MCU. Benefit by the software and hardware anti-interference design and full digital calibration, the pressure transmitter can provide 4-20mA and RS485 communication output at the same time, no mutual interference, the overall performance of the product is stable and reliable.

Applications

- Petroleum, chemical, electric power
- Mechanical engineering
- Process control and automation
- hydrology and flow pressure measure
- Hydraulic pressure

Features

- RS485 or 4 ~ 20mA DC two-wire output
- Digital compensation and nonlinear correction technology
- Anti interference design and hardware watchdog
- Support networking applications

Technical Parameters

Measuring range: -1bar~1000bar

Overpressure: 2XFS

Accuracy: $\pm 0.25\%$ FS

Stability: $\pm 0.2\%$ FS (1 year)

Output: 4-20mA+ RS485

Load: $\leq (U-11)/0.02\Omega$ (2-wire)

Insulation resistance: 100M Ω @50V DC

Housing: stainless steel 304

Diaphragm: stainless steel 316L

Zero thermal drift: $\leq \pm 0.03\%$ FS/ $^{\circ}\text{C}$ ($\leq 1\text{bar}$); $\leq \pm 0.02\%$ FS/ $^{\circ}\text{C}$ ($> 1\text{bar}$)

Span thermal drift: $\leq \pm 0.03\%$ FS/ $^{\circ}\text{C}$ ($\leq 1\text{bar}$); $\leq \pm 0.02\%$ FS/ $^{\circ}\text{C}$ ($> 1\text{bar}$)

Medium temperature: -10~80 $^{\circ}\text{C}$

Working temp.: -30 $^{\circ}\text{C}$ ~ + 70 $^{\circ}\text{C}$

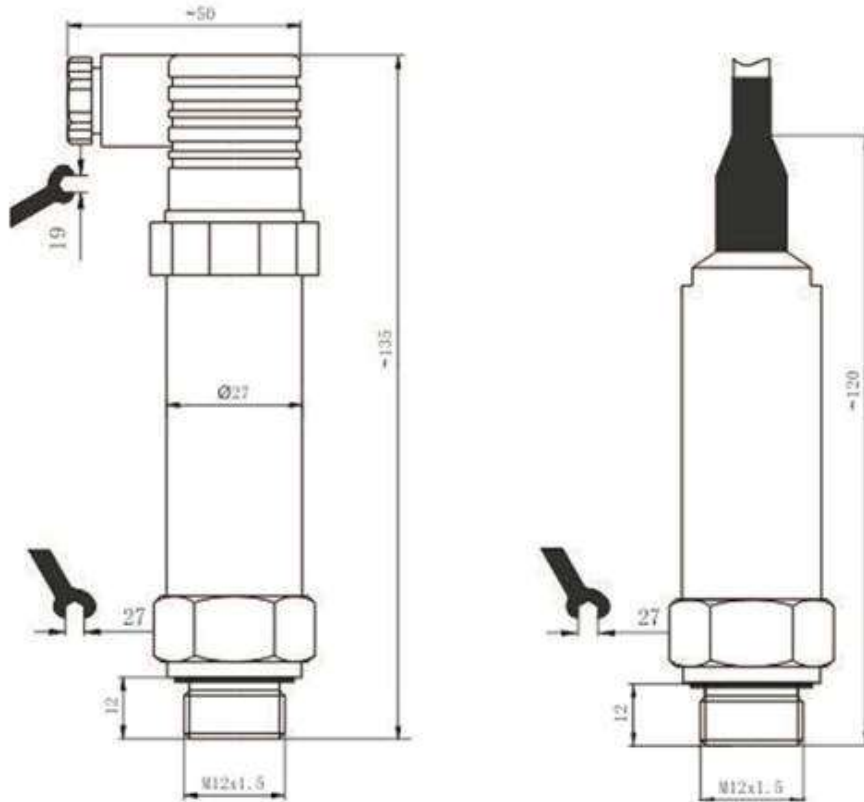
Storage Temp.: -30 $^{\circ}\text{C}$ ~ +70 $^{\circ}\text{C}$

Sealing ring: Viton

Protection level: IP65

Power supply: 11V~28VDC

Dimension

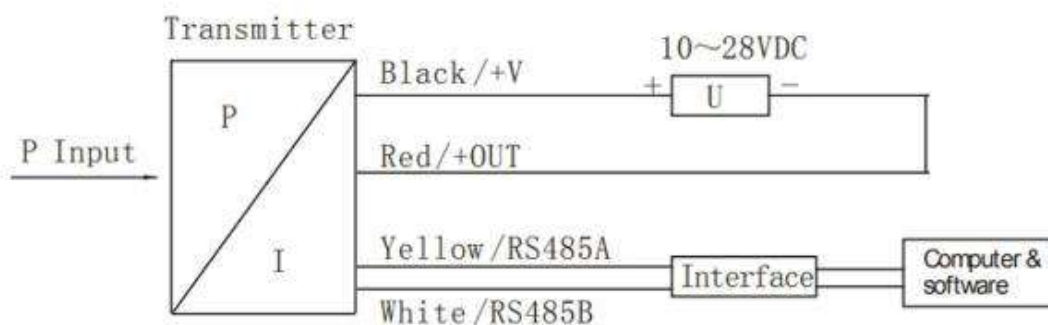


Electrical Connection

Transmitter connecting the outside by plug or cable:

Function	Inner plug pin color	Outer Electrical Connection		
		4-pin plug	Wire Color	7-pin plug
+V	1 (Black)	1	Black	1
-V	2 (Red)	2	Red	2
RS485B	4 (White)	$\frac{1}{2}$	White	5
RS485A	5 (Yellow)	3	Yellow	4

Electrical connection for transmitter with RS485 interface(MODBUS Protocol):



Ordering Guide

DR3451 Explosion Proof Pressure Transmitter
Range -1bar...0bar~0.1bar...1000bar
[0 ~ X]bar X: the actual measured pressure

Code Output signal

R1 4mA ~ 20mA DC

R2 4mA ~ 20mA + RS485

Code Notes

B1 4-pin Plug connection

B2 Cable connection

C1 M20x1.5 male, face type seal

C2 M20×1.5 male, waterline seal

C3 G1/2 male

C4 G1/4 male

C5 G1/4 female

C6 NPT1/2 male

C7 NPT1/4 male

G Gauge

A Absolute

S Sealed gauge

DR3451- [0~1]bar R1 B2C5G The whole spec