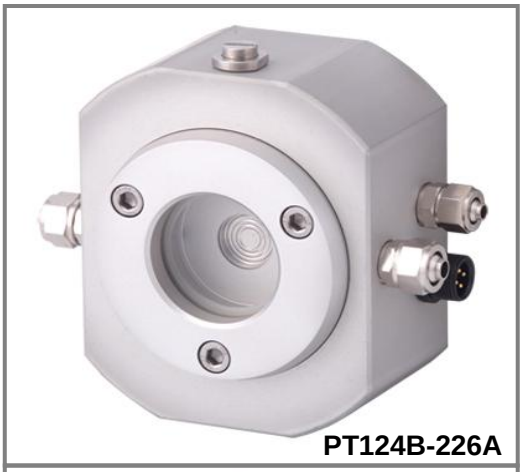
Intelligent structure health monitoring system

Settlement Sensor (Leveling sensor) PT124B-226

Description

Settlement is a common health problem in engineering structure and geological disasters. There are many kinds of geology, various states, complicated settlement causes, serious consequences, how to master the law of settlement change accurately ? To find out the main reasons that jeopardize engineering quality and geological safety, and to implement remedial, Become the top priority of "safety management" and "quality management". ZHYQ designed intelligent settlement sensor PT124B-226 , which can solve above problem well. It is adopted integrated module automatic measurement unit , high for vertical displacement and monocrystalline silicon chip, It is suitable for level measurement with small range and high accuracy; it is the ideal choice for the vertical displacement and tilt monitor for dam, nuclear power station, high-rise building, tunnel, bridge, underground, geological settlement, dangerous building , as well as compensation grouting near structures etc.



PT124B-226A

Work Principle

This system consists of individual sensors in series connect with reference sensor via a tube filled with water. transfer the process pressure signal to acquisition system.

The elevation changes of the individual sensors in the system are derived from the liquid pressure . this is done by comparing the liquid pressure at each sensor with the pressure at the reference sensor . Then calculation and analysis the displacement height of the measurement surface.

PT124B-226B

Application

◆Tunnel , Bridge , foundation pits,
◆ Railway track, subway rail
◆ Architecture Building , High-rise buildings
◆ Dam , Nuclear power plant
◆Geological subsidence

Features

◆Widely measurement range
◆Sub-millimeter accuracy
◆Single crystal silicon sensor chip high stability
◆Various standard signal outputs optional, easy for use
◆Ultra-low power consumption
◆Wireless ,Rs-485 , Modbus , LoRa communication protocol
◆Real-time precision monitoring of settlements
◆Intelligent compensation, intelligent filtering, intelligent self-diagnosis

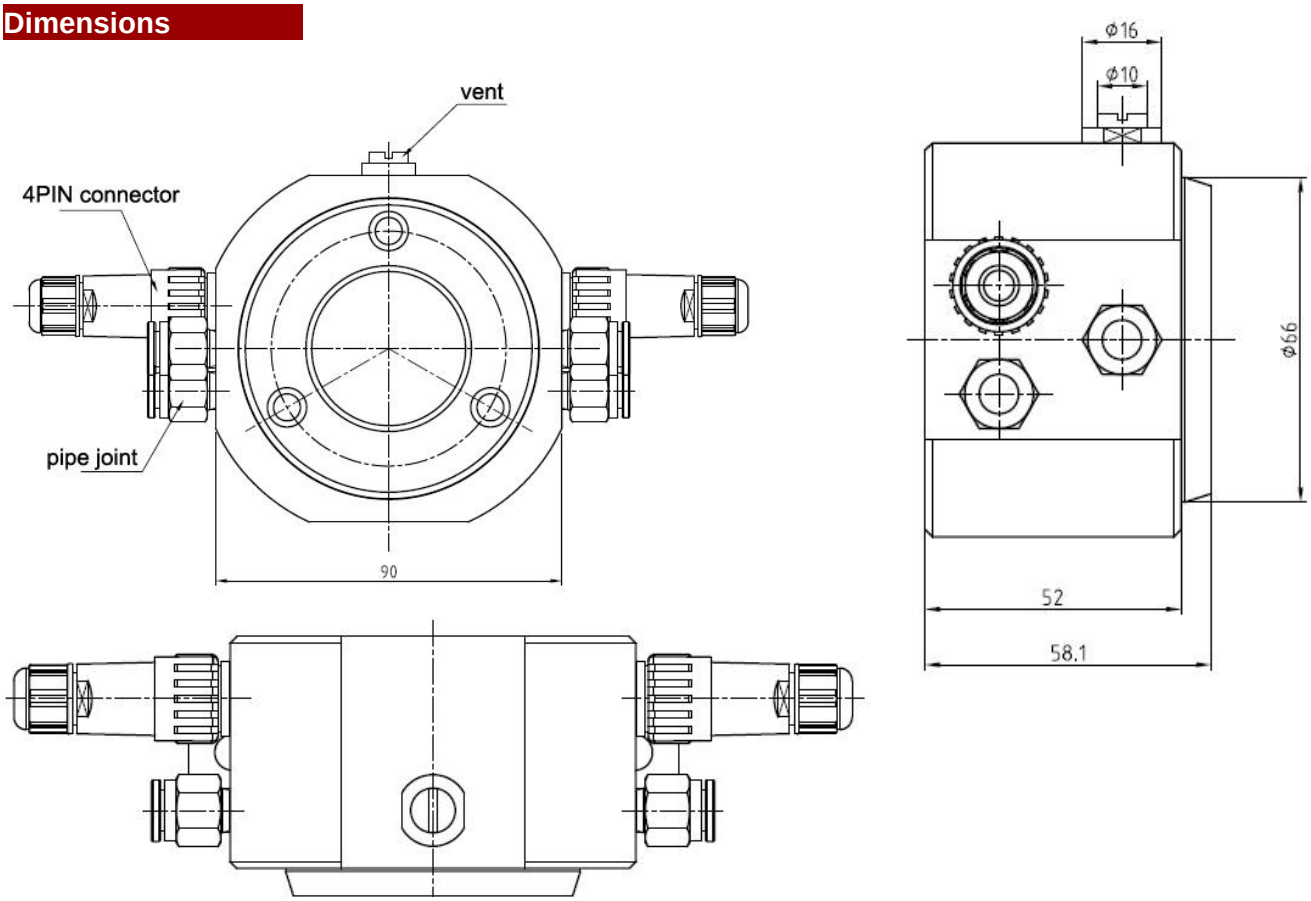
PT124B-226C

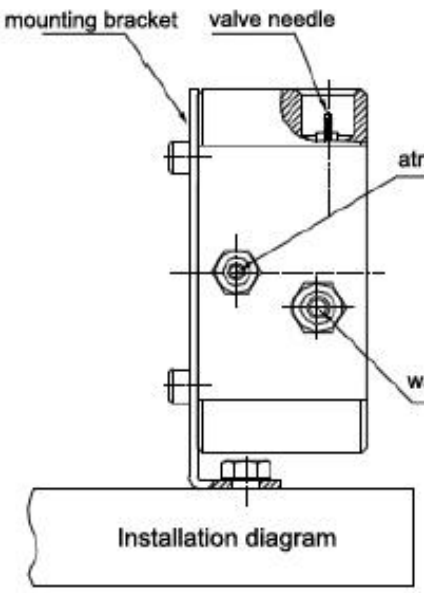
Settlement Sensor (Leveling sensor)

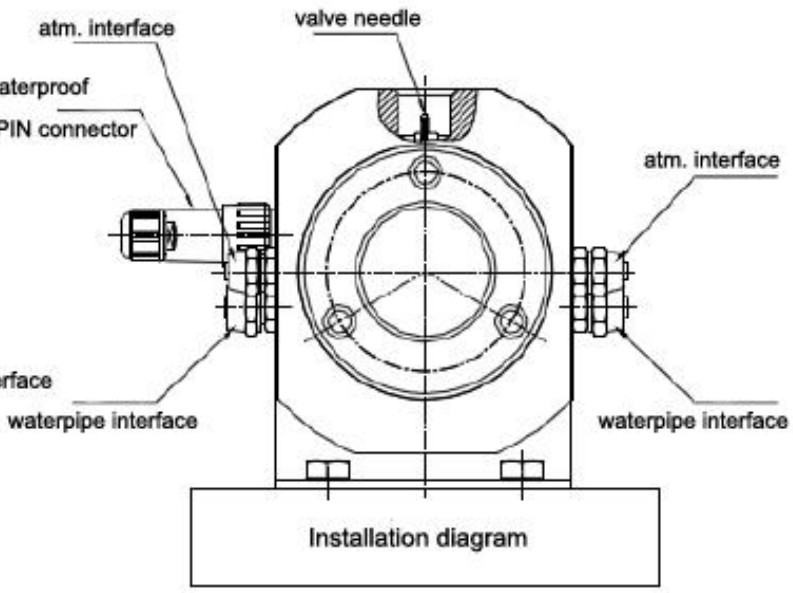
Specification

- ◆Range: 0-1500mmH_2O
- ◆Combined accuracy: 0.05%F.S
- ◆Stability: 0.03%F.S/Yr
- ◆Output: RS485, Modbus RTU
- ◆Power supply: 7-12V DC
- ◆Operating temperature: -20～85℃
- ◆Temperature compensation: 0-60℃
- ◆Over load: 150%
- ◆House material: aluminum alloy with anodized surface
- ◆Electrical connector: water proof 4PIN connector
- ◆Protection grade: IP67
- ◆Installation: vertical with exhaust valve upwards

Dimensions





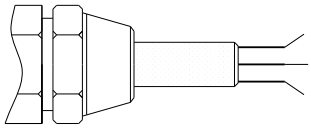


Real-time precision monitoring of settlements System

It is composed of measuring point, datum point, liquid storage assembly, connecting pipe, remote monitoring terminal and large data platform measurement and control system software. it is a typical Internet of things application. According to the technical requirements, the collection period can be set. When the collection time is set, the remote measurement and control terminal will automatically collect the data and forward the local server through the way of object communication.The local server side can implement data preservation, query, operation.The system includes automatic alarm, settlement results 3D modeling, trend line analysis and other functions.

The wireless , built-in GPRS- connection in RS485 signal output , allows remote monitoring of the project . data can be uploaded at preset intervals for online monitoring . you can also choose to receive the data via email on your PC , when and where you want .

Wiring Code

Electrical connector	4-20mA		0-10V, 0-5V	
	Function	Color	Function	Color
	E+	Red	E+	Red
	S+	Black	E	Yellow
	---	---	S+	Blue
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Ordering Guide

Model	Range (mmH_2O)	Output signal	Electrical connector	Accuracy	Other requirement
PT124B-226A	--	--	--	--	---
For example: PT124B-226A-500mmH_2O-RS485-4PIN-0.2mm					

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