PRESSURE MEASUREMENT YL125PT

YL125PT is an integrated temperature and pressure sensor that can measure temperature and pressure at the same time.

The temperature is a set of NTC thermistor signals. The NTC temperature sensor is protected by a metal shell. The sensing element does not contact the measured medium. The resistance signal line is directly connected to the PCB board through the lead, which solves the temperature measurement failure caused by vibration and corrosion.

The pressure is a 0.5-4.5V voltage signal. The pressure sensor uses a diffused silicon metal diaphragm oil-filled process and a fully welded sealing process to eliminate the risk of leakage caused by the sealing performance of the sealing ring and the corrosion of the sealing material by the measurement medium. The measured The media applicability is wider. This pressure sensor has high temperature stability and accuracy and is mainly used in new energy vehicle thermal management systems, air conditioning and other fields.

FEATURES

- Multiple process connection options and easy installation.
- 1% typical accuracy provides superior accuracy for critical applications.
- Factory calibrated, no on-site calibration required. Plug and play reliability.
- Sturdy and compact design, saving installation space.
- OEM/ODM available and can be adapted to special needs.

APPLICATION

- New energy vehicle thermal management system.
- Agricultural irrigation.
- Hvac pressure system control.

Specifications

Type	YL125PT
Supply voltage	4.75~5.25 VDC (with reverse polarity protection, overvoltage protection 32V DC)
Supply current	15mA MAX
Pressure range	0~5Bar, 0~10Bar, 0~20Bar, 0~40Bar, (customized)

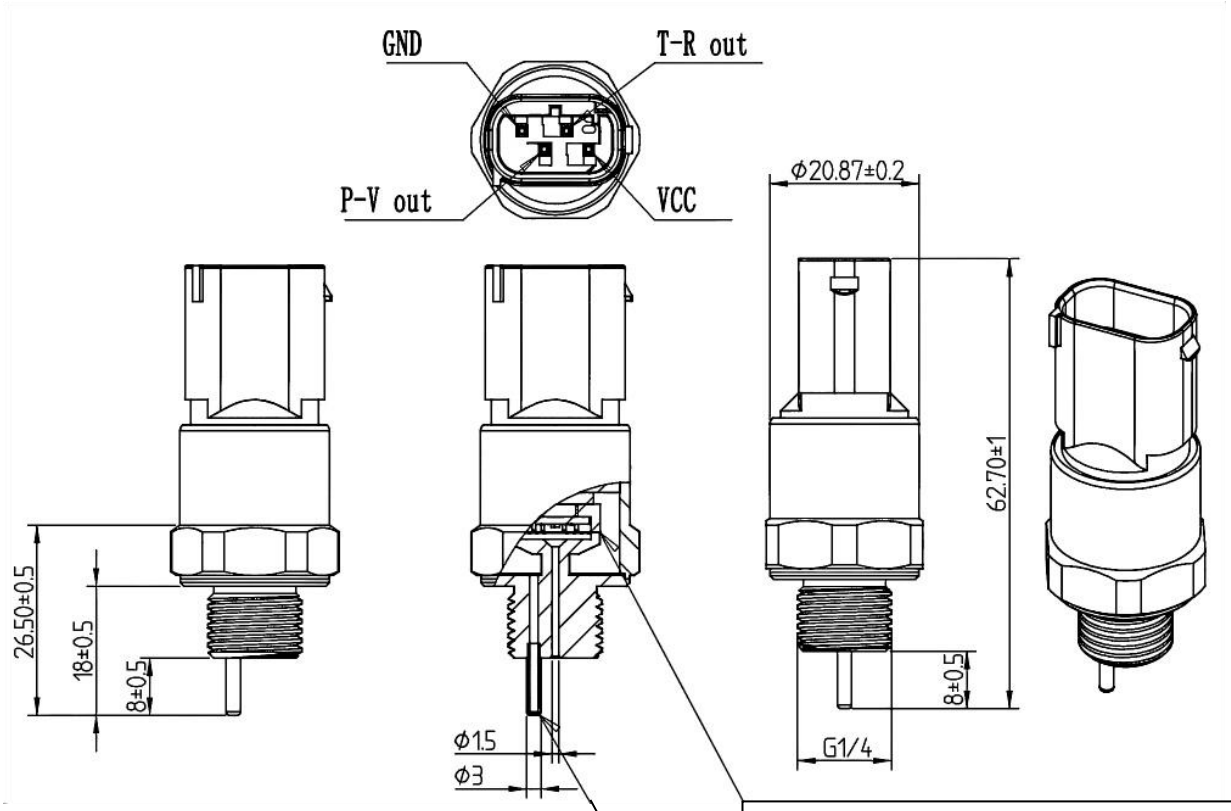
Output	0.5V~4.5V DC, (10%-90%Vcc)
Process connection	G1/4, M12x1.5, M10x1, (can be customized)
Electrical connection	TE 1-967640-1
Operating temperature	-40℃~130℃
Storage temperature	-50℃~135℃
Safety pressure	1.5~2 times the sensor range
Destroying pressure	10MPa G
Accuracy	±1%F.S (linearity, hysteresis, repeatability, calibration) Static error band @25℃ , 5VDC
NTC accuracy	±1%F.S
Total error band	±3%(-30℃~130℃)
Medium	Engine oil, POE oil, refrigerant, gas, water or liquid
Material	Temperature probe and housing 304 stainless steel; connector PPE+PAGF30
Installation torque	10~20N·m

Model Code Selection Table

Part	Number
Selection Type	YL85MA
Pressure type	G：Gauge pressure A：Absolute pressure S：Sealing pressure
Output	A：0.5-4.5V B：10%-90%Vcc X：By Customized
Pressure Range	1：0~5 2：0~10 3：0~20 4：0~40 X：By Customized
Pressure Units	B：bar P：Psi K：kPa M：MPa
Electrical Connection	C1：TE 1-967640-1 CX：By Customized
Pressure connection	P1：G1/4 P2：M12x1.5 P3：M10x1 PX：By Customized
Temperature NTC	T1：R25=10KΩ B25/50=3950K T2：R25=10KΩ B25/85=3435K T3：R25=10KΩ B25/100=3950K TX：By Customized

PRODUCT SIZE

Unit：mm



The pressure sensor uses a diffused silicon metal diaphragm oil-filled process and a fully welded ealing process to eliminate the risk of leakage caused by the sealing performance of the sealing ring and the corrosion of the sealing material by the measurement medium; the applicability of the measured medium is wider.

The metal shell of the NTC temperature sensor protects the package, and the sensitive element does not come into contact with the measured medium; the resistance signal line is directly connected to the PCB board through the lead; it solves the temperature measurement failure caused by vibration and corrosion.

R/T parameters:

temperature	R25=10KΩ±1% B25/85=3435±1%		
(℃)	R_Min(KΩ)	R_Nomn(KΩ)	R_Max(KΩ)
-40	184.7267	192.1904	199.9358
-30	109.7976	113.6351	117.5951
-20	67.1905	69.1948	71.2517
-10	42.2611	43.3184	44.3977
0	27.2091	27.766	28.3315
10	17.8075	18.0944	18.384
20	11.9519	12.0956	12.2398
25	9.9	10	10.1
30	8.1764	8.2746	8.3732
40	5.6919	5.781	5.8709
50	4.0446	4.1218	4.2001
60	2.9271	2.9926	3.0592
70	2.1533	2.2082	2.2642
80	1.6068	1.6526	1.6994
90	1.2173	1.2553	1.2945
100	0.9345	0.9662	0.999
110	0.7264	0.753	0.7805
120	0.5707	0.593	0.6161
125	0.508	0.5284	0.5496