Ultra-high purity pressure sensor, can be used in hazardous areas

Model: PT60

PT60
Unilateral connection

PT66
Modular face seal installation

Applications

- Semiconductors, flat panel displays and solar photovoltaic products
- High-purity media and special gas systems (gas supply systems, bulk gas supply, tank farm installation)

Features

- Compact design
- ATEX and IECEx zone 2 certification class I, division 2, groups A, B, C, D
- Protection level IP67 (NEMA 4), with bypass zero potentiometer
- Excellent EMC stability
- Automatic temperature compensation

The PT60 sensor is exquisitely designed and compact in structure, providing greater spatial freedom for the factory and the installation environment.the PT66 sensor is renowned for its excellent self-draining characteristics.its special connection design can prevent the sensor signals from being interfered by the loads of process connection parts or weld seams. the protection level of this series of sensors reaches IP67, and they can be used in harsh environments such as oil tank factories, outdoor special gas devices, and explosion-proof zone 2.

Specifications

Output signal
4-20mA two-wire system

Operating temperature
-20~85°C

Accuracy class
±0.25%, ±0.5%, ±1%

Compensation temperature
0-50℃

Scale range
-15~30psi,-15~3000psi
Or all other equivalent vacuum or compound pressure and vacuum ranges

Temperature effect
±0.15%, ≤10°C

Pressure limitation
- 2 x
- 4 x the measurement range of 0 - 0.2 MPa [0 - 30 psi]

Zero adjustment
Manual zero adjustment

Load Ω
Output signal 4-20 mA: ≤ (supply voltage – 10 V) / 0.02 A

Supply voltage
10~30VDC

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KYLIN WEIKE
KYLINWEIKE SENSING FUTURE

Model: PT60

Specifactions

Process connection
Process connection:
■ 316L, compliant with SEMI F20
■ 316L VIM/VAR
Film sensor:
■ 2.4711 / UNS R30003

Non-linearity
■Compliant with BFSL, IEC 61298-2
■Measurement range: > 0.2 MPa, ≤ measurement range0.2%
■Measurement range: ≤ 0.2 MPa, ≤ measurement range0.5%

Maximum measurement deviation
RSS (statistical analysis method)
■ Measurement range ≤ 0.2 MPa, ≤ measurement range0.5%
■ Measurement range > 0.2 MPa, ≤measurement range 0.2%
Compliant with IEC 61298-2
■ Measurement range ≤ 0.2 MPa, ≤measurement range 1%
■ Measurement range > 0.2 MPa, ≤measurement range 0.5%

Zero adjustment
■ Current output: -5... +3.5% of the range (adjusted via potentiometer)
■ Voltage output: -2... +5% of the range (adjusted via potentiometer)

Repeatability
■ In compliance with IEC 61298-2
■ ≤ Measurement range0.2%

Average temperature coefficient
■ -20... +80°C [-4... +176°F] (active compensation)
■ Zero point: ≤ measurement range0.1 %/10 K
■ Measuring range: ≤measurement range0.15 %/10 K

Long-term drift
■ In compliance with IEC 61298-2
■ Measuring range: > 0.2 MPa, ≤ measurement range0.4%
■ Measuring range: ≤ 0.2 MPa, ≤ measurementrange0.5% , under reference conditions

Benchmark condition
Compliant with IEC 61298-1

Power supply
Supply voltage:
■ Output signal DC 1-5 V / 4-20 mA: DC 10-30 V
Maximum power supply (Pmax):
■1 W

Dynamic behavior
Response time (10-90 %): ≤ 300 ms

Ingress protection
IP67

Electrical connection
■ Bayonet connector (4-pin): IP67
■ Round connector M12 x 1 (4-pin): IP67 (NEMA 4)
■ Connecting wire
1. IP67 (NEMA 4)
2. Cable cross-sectional area: 0.22 mm² (AWG 24)
3. Cable diameter: 4.8 mm
4. Cable length: 1.5 m [5 ft]; 3 m [10 ft]

Short-circuit resistance
S+ vs. U-

Reverse polarity protection
U+ vs. U-

Insulation voltage
DC 500 V

Case
304 SS

Surface treatment
Electro-polishing, in compliance with SEMI F19

Surface roughness Ra
Typical value: ≤ 0.13 µm (RA 5)
Maximum value: ≤ 0.18 µm (RA 7)

Allow medium
■ Special gases
■ Steam
■ Liquids

Helium leakage test
$<1 \times 10^{-10}$ MPa l/sec(atm STD cc/sec), comply with SEMI F1

Vibration resistance
Comply with IEC 60068-2-6
0.35 mm (10 ... 58 Hz) / 5 g (58.1 ... 2,000 Hz)

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Specifactions

Impact resistance
■IEC 60068-2-27
■500 g (1.5 ms)

Assembly and packaging location
Class 5 cleanroom, compliant with ISO 14644

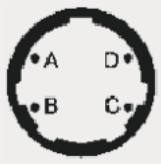
Package
Double-layer packaging, in compliance with SEMI E49.6

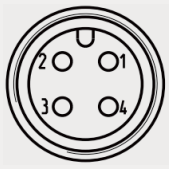
Instrument label
WEIKE product label, adhesion

Safety characteristic value
MTTF: > 100 years

Working conditions				
Permissible temperature range	Non-explosion-proof	T4	T5	T6
Medium temperature limit	-20 ... +100 °C [-4 ... +212 °F]	-20 ... +85 °C [-4 ... +185 °F]	-20 ... +60 °C [-4 ... +140 °F]	-20 ... +40 °C [-4 ... +104 °F]
Environmental temperature limit	-20 ... +85 °C [-4 ... +185 °F]	-20 ... +85 °C [-4 ... +185 °F]	-20 ... +60 °C [-4 ... +140 °F]	-20 ... +40 °C [-4 ... +104 °F]
Storage temperature limit	-40 ... +100 °C [-40 ... +212 °F]	-20 ... +85 °C [-4 ... +185 °F]	-20 ... +85 °C [-4 ... +185 °F]	-20 ... +85 °C [-4 ... +185 °F]

Lead wire allocation

Bayonet connector (4-pin)			
		two-wire system	
	U+	A	
	U−	D	
	S+	-	

Round connector M12 x 1 (4 pins)			
		two-wire system	
	U+	1	
	U−	3	
	S+	-	

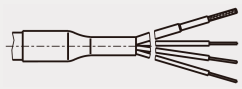
Connecting wire			
		two-wire system	three-wire system
	U+	red	red
	U−	black	black
	S+	-	brown

Illustration
U+: Positive terminal of the power supply
U-: Negative terminal of the power supply
S+: Positive output terminal

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Output
(A) - 4-20mA

Electrical interface
(A5) - Bayonet connector (4-pin)
(A6) - Round connector M12 x 1 (4 pins)
(A7) - Connecting wire

Process connection

(CS)-C seal	(SF)-Female thread 9/16 -18 UNF (Compatible with 1/4 VCR®)
(WS)-W seal	(SM)-Male thread 9/16 - 18 UNF (Compatible with 1/4 VCR®)

Accuracy
(B4) - 0.25%
(B2) - 0.5%
(B3) - 1%

Cable length
(C3) - 1.5 m [5 ft]
(C4) - 3 m [10 ft]

Scale Range(coding examples only, see range table on page 5 for all standard ranges)

0.3BR=0...0.3bar	N=Vaccum range
0.3KG=0...0.3kg/cm2	N1/3BR="-1...3bar"
6KP=0...6kPa	
0.6MP=0...0.6MPa	
30#=0...30psi	

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Pressure range selection table

Gauge pressure, model PT60

Scale ranges				
Bar	Kg/cm²	Psi	kPa	MPa
2BR	2KG	30#	200KP	0.2MP
4BR	4KG	60#	400KP	0.4MP
7BR	7KG	100#	700KP	0.7MP
11BR	11KG	160#	1100KP	1.1MP
17BR	17KG	250#	1700KP	1.7MP
25BR	25KG	350#	2500KP	2.5MP
36BR	36KG	500#	3600KP	3.6MP
70BR	70KG	1000#	7000KP	7MP
100BR	100KG	1500#	10000KP	10MP
145BR	145KG	2000#	14500KP	14.5MP
225BR	225KG	3000#	22500KP	22.5MP
360BR	360KG	5000#	36000KP	36MP

Gauge pressure, model PT66

Scale ranges				
Bar	Kg/cm²	Psi	kPa	MPa
2BR	2KG	30#	200KP	0.2MP
4BR	4KG	60#	400KP	0.4MP
7BR	7KG	100#	700KP	0.7MP
11BR	11KG	160#	1100KP	1.1MP
17BR	17KG	250#	1700KP	1.7MP

Other measurement ranges can be provided as required

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