

PRESSURE SENSOR
0.5 – 4.5 Vdc High Output Signal
PC18-0545 & PCT18-0545 Models

- ◆ **Technology : *Thick Film Strain Gage On Ceramic***
+ Pt 1000 Platinum Probe
- Dual (P + T) simultaneous measurements (PCT18-0545 Model)**
- Global temperature effect (Z+S) : ± 0.03% FS / °C**
- Operating temperature range : - 25 up to + 85°C**
- High reliability level**
- Excellent long term stability**

18 mm Diameter
0...1 to 0...600 bar
Absolute and Gage Pressure

All applications

All aggressive fluids (★)

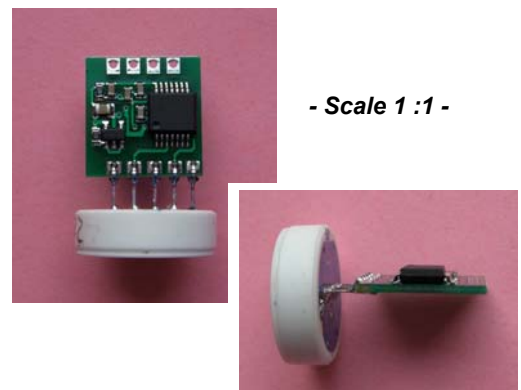
The PC/PCT18-0545 model combines a **Temperature Compensated PC18** sensor and an **electronic board** equipped with an **ASIC programmable instrumentation amplifier** generating a normalized **0.5 to 4.5 Vdc** output signal.

The PC/PCT18-0545 is an " **ideal sensing element** " for manufacturing economical pressure transmitters allowing the Designer to neglect the temperature effect on both Zero and Span.

- ❖ **Easy mechanical integration**
- ❖ **Low space required**
- ❖ **Attractive Price / Performance ratio**

- ◆ **OEM Industrial equipments - Transmitters manufacturing**

- ◆ **Typical Applications : Pneumatic, hydraulic, medical, chemical, petrochemical, pharmaceutical, food processing industries...**



Mechanical specification :

MODELS	Rated Range (bar)	Burst pressure (bar)
• PC18/PCT18-0545 – 1	0...1	4
• PC18/PCT18-0545 – 2	0...2	5
• PC18/PCT18-0545 – 5	0...5	12
• PC18/PCT18-0545 – 10	0...10	25
• PC18/PCT18-0545 – 20	0...20	50
• PC18/PCT18-0545 – 50	0...50	125
• PC18/PCT18-0545 – 100	0...100	250
• PC18/PCT18-0545 – 200	0...200	400
• PC18/PCT18-0545 – 400	0...400	700
• PC18/PCT18-0545 – 600	0...600	800

Custom solutions up to 1000 bar available on request.

Combined error (Linearity + Hysteresis)	≤ ± 0.3% FS [Terminal based] [0..2 bar to 0...50 bar]
Repeatability	≤ ± 0.4% FS [Terminal based] [0..1 bar, 0...100 bar to 0...600 bar]
	≤ ± 0.1% FS

(★) Except Hydrofluoric acid

RoHS Compliant
Directive 2002/95/EC

Specification subject to change without prior notice

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Electrical specification : (continued)

▣ **PRESSURE**

- Excitation voltage [V_{Supply}] 6 to 16 Vdc (0545-Y Model)
- Ratiometric Models ✧ 2.7 to 5.5 Vdc (0545-N Model)
- Consumption ≤ 2.5 mA at 5Vdc
- Load Impedance [Ω] ≥ 10 KΩ
- Initial unbalance 0.5 Vdc ± 1.5% FS ✧ 10% V_{Supply} (0545-N Model)
- Full Scale Output signal 4.5 Vdc ± 1.5% FS ✧ 90% V_{Supply} (0545-N Model)
- Dielectric strength > 2 kV
- Zero point long term stability ± 0.2% FSO, typ. (non cumulative versus time)

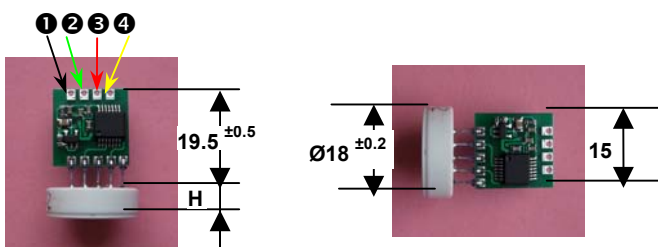
▣ **TEMPERATURE** (PCT18-0545 Model only)

- Pt 1000 Probe 1000 Ω at 0 °C
- Class B
- Sensitivity Coefficient + 3850 ppm / °C
- Norms Conformity to IEC 751 / EN 60751

Environmental specification :

- Material in contact with fluid Alumina Al₂ O₃ – 96%
- Operating temperature range (Fluid) - 25 to + 125°C
- Operating temperature range (Ambient) - 25 to + 85°C
- Storage temperature range - 40 to + 105°C
- Residual temperature effect (Zero and Span) ≤ ± 0.03% FS* / °C [Ranges 5 up to 600 bar]
- *Option: ±0.015% FS / °C. ≤ ± 0.04% FS* / °C [Range 1 bar & 2 bar]
- Relative Humidity (Absolute sensor) 0 - 100%
- Relative Humidity (Gage Sensor) 0 - 70%
- Total weight ~ 10 g

Dimensions (mm) :



Thickness of the Sensors			
FS (bar)	H (mm)	FS (bar)	H (mm)
1	5.18 +/- 0.08	50	5.65 +/- 0.10
2	5.25 +/- 0.08	100	5.95 +/- 0.10
5	5.25 +/- 0.08	200	6.25 +/- 0.10
10	5.33 +/- 0.08	400	6.85 +/- 0.10
20	5.45 +/- 0.08	600	7.15 +/- 0.10

Electrical wiring : (3 or 4 wires)

- ① : - Excitation (common with RTD probe)
- ② : + Output
- ③ : + Excitation
- ④ : + Output Temp. RTD 1000Ω (only for PCT18 version),

◆ **Ordering Code:** **PC18-0545 - X -XXX-X- X**

Model (PC18 or PCT18 version) →

Excitation voltage (6 to 16 Vdc) Y
 (2.7 to 5.5 Vdc) N

Pressure range (in bar) →

Pressure measurement (Absolute) A
 (Gage/Rel.) R

Residual temperature drift (Standard) 0
 (Special) 1

Important Notice:

- ▣ Refer to **Inst01** (PC/PCT18 - Instruction For Use)
- ▣ Additional Info : Consult **Technical Notes on web**

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