

PHD600

- Latest strain gauge technology.
- Thick film ceramic technology.
- All stainless steel wetted parts.
- Ranges from 0-1 bar to 0-600 bar.
- Output options 1-5V, 0-5V, 0-10V and 4-20mA.
- Supply voltage from 8/13V to 30Vdc.
- Misconnection protection.

Description

PHD600 series of **Pressure Transducers** are based on latest strain gauge with 17 - 4PH stainless steel diaphragm for ranges of over 25 bar. And the sensing elements for measuring bridge deposited on ceramic diaphragm (ie thick film technology) for ranges under 25 bar.

Applications for PHD600 include the continuous monitoring of oil, gas, water and other liquids in the process. They also apply in the measurement and control of pressure in refrigeration, compressor, press, injection and engine monitoring system.

PHD600 Pressure Transducers are available in pressure ranges from 0-1 bar to 0-600 bar gauge or absolute. They have electrical outputs of 1-5Vdc, 0-5Vdc, 0-10Vdc and 4-20mA (2 wire).

Technical data

Output signal	0-5V / 1-5V	0-10V	4-20mA
Input			
Pressure ranges	0-1 bar to 0- 600 bar		
Pressure reference	Gauge / Absolute		
Over pressure	See table bellow		
Burst pressure	See table bellow		
Output			
Span	0-5/1-5Vdc	0-10Vdc	4-20mA
Zero offset	< ±0.13%FSO	< ±0.10%FSO	< ±0.13%FSO
Resolution	Infinite		
Type	3 wire		2 wire
Accuracy *	< ±0.25% FSO (< ±0.35% FSO for ceramic sensor)		
Long term stability	±0.2% FSO / per year		
Electrical			
Supply voltage	8 - 30Vdc	13 - 30Vdc	9 - 40Vdc
Supply voltage effects	0.004%FSO / V	0.008%FSO / V	0.012%FSO / V
Power requirements	<12 mA	<17 mA	-----
Load driving capability	2.5K (min)	5K (min)	1550Ω 40Vdc
Reverse polarity	Protected		
Output short circuit	No damage		
Misconnection	Protected		
Insulation resistance	100MΩ 100Vdc		
Response time	<1ms		
Environmental			
Operating temperature range	-20 to 85°C		
Storage temperature range	-40 to 105°C		
Thermal zero shift	< 0.02%FSO /°C (< 0.035%FSO /°C for ceramic sensor)		
Thermal sensitivity shift	< 0.025%FSO /°C (< 0.012%FSO /°C for ceramic sensor)		
Vibration tolerance	10g's to 50Hz		
Mechanical shock	15g(11mS)		
Operating humidity	95% RH		
Physical			
Pressure media	Stainless steel 17- 4PH / Ceramic AL ₂ O ₃ + 316L		
Pressure connection	G 1/ 4" R 1/ 4"		
Housing material	Stainless steel 304		
Electrical connection	DIN plug + socket to DIN43650 / Shielded cable AWG26 UL No.2464		
Enclosure rating	IP65 / IP54 (Shielded cable)		
Natural frequency	20KHz 17-4PH / 12KHz Ceramic		
Weight	110grams approx		
CE Conformity	EN61326 - 1 (2006)	IEC / EN61000 - 4 - 2 / 3 / 4 / 6	

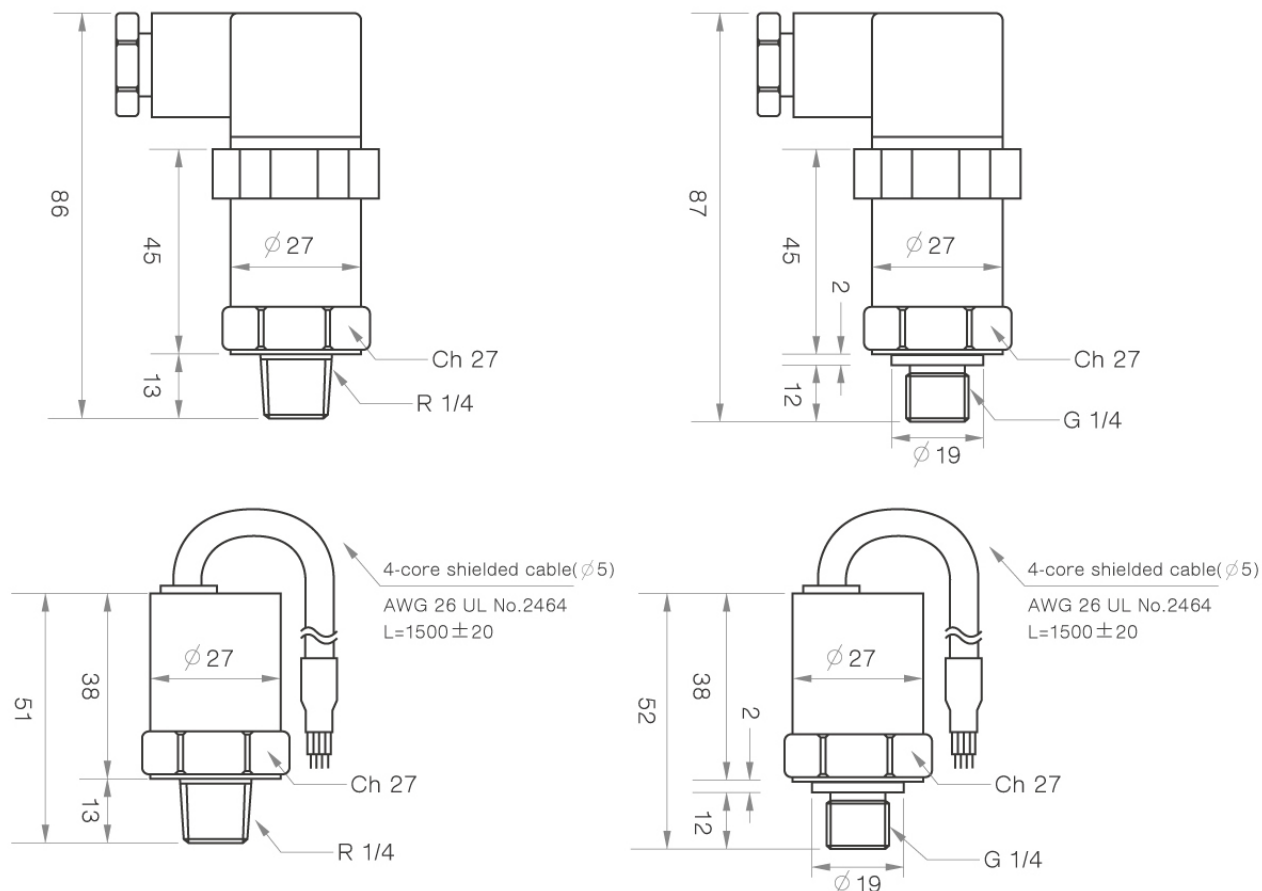
FSO $\Rightarrow$ Full Scale Output.

Accuracy * $\Rightarrow$ Combined non-linearity, hysteresis and repeatability.

Pressure ranges

Ranges(bar)	1	1.6	2	2.5	4	6	10	16	20	25	40	60	100	160	200	250	400	600
Over pressure(bar)	3	4	4	10	10	20	20	40	40	100	2xrated Pressure							
Burst pressure(bar)	4	5	5	12	12	25	50	50	120	120	4xrated Pressure							

Dimensions : mm



Electrical connection diagrams

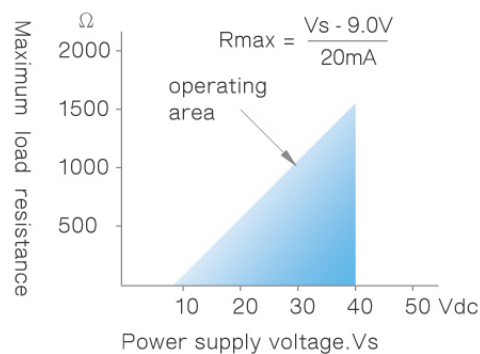
Transducer : 1-5V,0-5V and 0-10V output

			cod1	cod2	cod3	cod4	cod7
supply	V+		1	3	2	1	red
output	V-		2	2	1	3	black
	V0		3	1	3	2	yellow
ground	G						white

Transmitter : 4-20mA output

			cod5	cod6
supply	V+		1	red
signal	V-		2	black
	N/C		3	yellow
ground	G			white

Load driving chart (4-20mA)



Ordering information

PHD 6 0 0 — 0 0 0

Output/Supply voltage

1. 1 - 5V/8 - 30V
2. 0 - 5V/8 - 30V
3. 0 - 10V/13 - 30V
4. 4 - 20mA/9 - 40V

Electrical connections

5. Shielded cable
AWG26 UL No2464
6. Plug/Socket
DIN 43650

Pressure connections

2. R 1/4
3. G 1/4

Connection diagrams

1. 1 V+ 2V- 3Vo ⊕ Ground
2. 3 V+ 2V- 1Vo ⊕ Ground
3. 2 V+ 1V- 3Vo ⊕ Ground
4. 1 V+ 3V- 2Vo ⊕ Ground
5. 1 V+ 2V- 3N/C ⊕ Ground
6. Red V+ Black V- Yellow N/C White Ground
7. Red V+ Black V- Yellow Vo White Ground



PHOENIXTRON CO., LTD.

運澤企業有限公司

4F.No.22 Lane 51, Heng Guang St. Wen Shan, Taipei, Taiwan, R.O.C

Tel : 886-2-2937 2007

Fax : 886-2-2937 7803

Mail : sal-tec@pnx.com.tw

Web: www.pnx.com.tw