

# High Accuracy Heavy-Duty Pressure Transducer



measuring  
•  
monitoring  
•  
analyzing

KPG



- Advanced Diffused Semi-conductor and Sputtered Thin Film Sensor Technology
- Variety of Output Signals
- CE Compliant to Suppress RFI, EMI, & ESD
- Absolute or Gauge Measuring Ranges
- High Overpressure Protection
- Fast Response Time
- Stainless Steel Construction
- Pressures up to 145000 PSIG and up to 300 PSIA
- Available with a Variety of Electrical Connections



KOBOLD companies worldwide:

ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHILE, CHINA, COLOMBIA, CZECH REPUBLIC, EGYPT, FRANCE, GERMANY, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, ROMANIA, SINGAPORE, SPAIN, SWITZERLAND, TAIWAN, THAILAND, TUNISIA, TURKEY, UNITED KINGDOM, USA, VIETNAM

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## High Accuracy Heavy-Duty Pressure Transducer Model KPG

### Description

KOBOLD KPG series transducers are designed for heavy duty applications requiring high accuracy. Utilizing either advanced diffused semi-conductor or sputtered thin film technology, the KPG achieves accuracies of  $\pm 0.125\%$  at pressures up to 145,000 PSIG. It offers shock resistance, extreme long term sensor stability, and excellent noise immunity (CE compliance). The KPG also offers protection against common installation problems such as reverse polarity wiring, overvoltage, and short circuiting.

### Applications:

- Hydraulic and Pneumatic Systems
- Industrial Machinery and Machine Tools
- Injection Molding Machines
- Stamping and Forming Processes
- Pumps and Compressors
- Laboratory and Test Equipment
- HVAC Systems
- Refrigeration Equipment
- Petrochemical

### Technical Specifications

**Pressure Ranges:** -30...0" Hg to 0...145,000 PSIG  
0...15 PSIA to 0...300 PSIA

#### Accuracy

(Includes the effects of non-linearity, hysteresis, non-repeatability, zero point and full scale errors)

**Standard:**  $\pm 0.25\%$  of Full Scale BFSL

**Optional:**  $\pm 0.125\%$  of Full Scale BFSL

**Stability:**  $< \pm 0.2\%$  of Full Scale for 1 year,  
Non-Accumulating

**Process Connection:** 1/4" NPT, 1/2" NPT, or  
9/16"-18 UNF 2B

#### Materials of Construction

##### Wetted Parts:

**Measuring Element:** 316 Stainless Steel ( $\leq 300$  PSIG)  
17-4PH Stainless Steel ( $\geq 500$  PSIG)

**Connection:** 316 Stainless Steel

**Housing:** 316 Stainless Steel

#### Temperature Specs

**Compensated:** 32...175 °F

**Drift:**  $\pm 0.01\%/^{\circ}\text{F}$  for zero and span

**Media:** -20...212 °F

**Ambient:** -15...175 °F

**Storage:** -40...212 °F



### Pressure Limitations

#### 0...2 PSIG to 0...200 PSIG

**Proof Pressure:** 3x range

**Burst Pressure:** 3.8x range

#### 0...300 PSIG to 0...10,000 PSIG

**Proof Pressure:** 1.75x range

**Burst Pressure:** 4x range

#### 0...15,000 PSIG

**Proof Pressure:** 1.5x range

**Burst Pressure:** 3x range

#### 0...20,000 PSIG to 0...145,000 PSIG

**Proof Pressure:** 1.2x range

**Burst Pressure:** 1.5x range

#### Adjustability:

$\pm 10\%$  Full Scale for Zero and Span

#### Response Time:

$< 1$  ms (10-90% Full Scale)

#### Service Life:

$> 100,000,000$  Load Cycles

#### Output:

4-20 mA, 2-wire

0-5 V<sub>DC</sub>, 3-wire

1-5 V<sub>DC</sub>, 3-wire

0-10 V<sub>DC</sub>, 3-wire

#### Input Power:

10-30 V<sub>DC</sub> (4-20 mA, 1-5 V<sub>DC</sub>, 0-5 V<sub>DC</sub>)

14-30 V<sub>DC</sub> (0-10 V<sub>DC</sub>)

#### Load Limitations:

**4-20 mA:**  $\leq (V_{\text{power Supply}} - 10)/0.020$  Amp

**0-5V<sub>DC</sub>:**  $\geq 5,000 \Omega$

**0-10 V<sub>DC</sub>:**  $\geq 10,000 \Omega$

#### Shock Sensitivity:

1000g according to IEC 60068-2-27

#### Vibration Sensitivity:

15g according to IEC 60068-2-6

#### Protection

**Environmental:** IP65

**Electrical:** Reverse Polarity, Overvoltage and Short Circuit

#### Electromagnetic Rating:

CE Compliant to EMC Norm

EN 61326:1997/A1:1998

RFI, EMI, and ESD Protection

#### Weight:

7.2 oz approx.



**Order Details** (Example: **KPG-005001288D**)

Model	Pressure Range			
KPG-	..0030V.. = -30"Hg...0 PSIG	..00015.. = 0...15 PSIG	..02000.. = 0...2000 PSIG	..72000.. = 0...72000 PSIG
	..30/15.. = -30" Hg...15 PSIG	..00030.. = 0...30 PSIG	..03000.. = 0...3000 PSIG	..87000.. = 0...87000 PSIG
	..30/30.. = -30" Hg...30 PSIG	..00060.. = 0...60 PSIG	..04000.. = 0...4000 PSIG	..100XX.. = 0...100000 PSIG
	..30/60.. = -30" Hg...60 PSIG	..00100.. = 0...100 PSIG	..05000.. = 0...5000 PSIG	..115XX.. = 0...115000 PSIG
	..30/100.. = -30" Hg...100 PSIG	..00150.. = 0...150 PSIG	..06000.. = 0...6000 PSIG	..145XX.. = 0...145000 PSIG
	..30/150.. = -30" Hg...150 PSIG	..00200.. = 0...200 PSIG	..07500.. = 0...7500 PSIG	..0015A.. = 0...15 PSIA
	..30/200.. = -30" Hg...200 PSIG	..00300.. = 0...300 PSIG	..10000.. = 0...10000 PSIG	..0030A.. = 0...30 PSIA
	..30/300.. = -30" Hg...300 PSIG	..00500.. = 0...500 PSIG	..15000.. = 0...15000 PSIG	..0060A.. = 0...60 PSIA
	..00002.. = 0...2 PSIG	..00600.. = 0...600 PSIG	..20000.. = 0...20000 PSIG	..0100A.. = 0...100 PSIA
	..00003.. = 0...3 PSIG	..00750.. = 0...750 PSIG	..30000.. = 0...30000 PSIG	..0150A.. = 0...150 PSIA
	..00005.. = 0...5 PSIG	..01000.. = 0...1000 PSIG	..36000.. = 0...36000 PSIG	..0200A.. = 0...200 PSIA
	..00010.. = 0...10 PSIG	..01500.. = 0...1500 PSIG	..58000.. = 0...58000 PSIG	..0300A.. = 0...300 PSIA

**Order Details** (Continued) (Example: **KPG-005001288D**)

Accuracy	Output Signal	Fitting	Electrical Connection	Options
..1.. = 0.25% of Full Scale (Standard)	..1.. = 4-20 mA, 2-Wire (Standard)	..2.. = 1/4" NPT (20,000 PSIG max.)	..1 = Hirschmann Mating Connector with 36" Polyurethane-Clad Cable	
..2.. = 0.125% of Full Scale	..2.. = 0-5 VDC, 3-Wire	..6.. = 9/16"-18 UNF 2B Female (Standard for 30,000 to 145,000 PSIG Models)	..3 = 6-Pin Bendix (Ni-plated Aluminum)	..D = Surge Damping Orifice
	..3.. = 1-5 VDC, 3-Wire	..8.. = 1/2" NPT Male (20,000 PSIG max.) (Standard)	..6 = 1/2" NPT Male Conduit with 36" Polyurethane-Clad Cable	..EC <sup>1)</sup> = Extended Cable
	..5.. = 0-10 VDC, 3-Wire		..8 = Hirschmann Mating Connector (Standard)	
			..14 = Hirschmann Mating Connector with 1/2" NPT Conduit	
			..25 = M12 x 1(4-pin Micro DC)	

**Accessories:** P/N 807.037 = 4-Pin Micro-DC Connector with 6-foot Cable for Electrical Connection 25  
 P/N 807.037/5M = 4-Pin Micro-DC Connector with 16-foot Cable for Electrical Connection 25  
 P/N 807.037/10M = 4-Pin Micro-DC Connector with 32-foot Cable for Electrical Connection 25

<sup>1)</sup> Only with Electrical Connection Options 1 or 6

**Diaphragm Seals\***

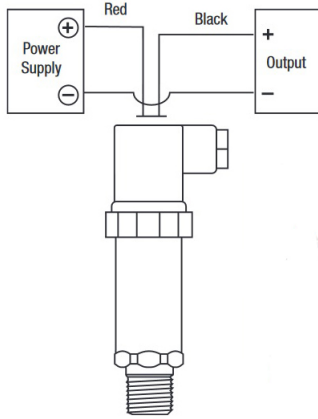
Model	Description
KP-120415	1-1/2" Tri-Clamp® 316 SS Diaphragm Seal with Glycerine Fill
KP-120420	2" Tri-Clamp® 316 SS Diaphragm Seal with Glycerine Fill
KP-2004 SSG	3/4" NPT 316 SS Flush Diaphragm Seal with Glycerine Fill

\* Only for Ranges ≥ 0...60 PSIG and Fitting Option 8



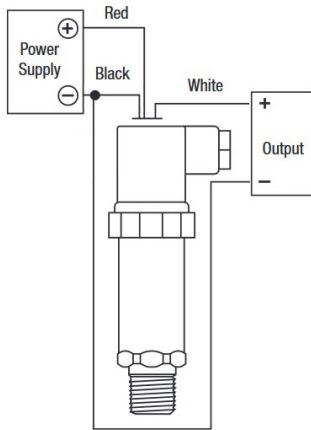
Wiring Diagrams and Electrical Connections

4-20 mA Output, 2 Wire



4-20 mA Output, 2 Wire				
Wire	Hirschmann	Cable	M12x1	6-pin Bendix
+ Supply	pin 1	Red	pin 1	pin A
+ Output	pin 2	Black	pin 3	pin B

Voltage Output, 3 Wire



Voltage Output, 3 Wire				
Wire	Hirschmann	Cable	M12x1	6-pin Bendix
+ Supply	pin 1	Red	pin 1	pin A
Common	pin 2	Black	pin 3	pin B
+ Output	pin 3	White	pin 4	pin C

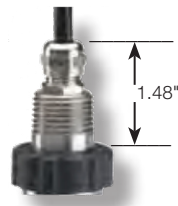
Dimensions

Option Code 8



Option Code 6

1/2" NPT Conduit with 36" Polyurethane-Clad Cable



Option Code 14

Hirschmann with 1/2" NPT Female Conduit



Option Code 3\*

6-Pin Bendix



Option Code 25\*

M12 x 1 (4-Pin)



\*Mate Supplied Separately or Customer Supplied