# KPK COMPACT HIGH PRECISION PRESSURE TRANSDUCER



Flow
Pressure
Level
Temperature
measurement
monitoring
control





## **USA**

KOBOLD Instruments Inc. 1801 Parkway View Drive USA-Pittsburgh, PA 15205 +1 412-788-2830

+1 412-788-2830
 Fax +1 412-788-4890
 E-mail: info@koboldusa.com



## **CANADA**

KOBOLD Instruments Canada Inc. 9A Aviation Pointe-Claire, QC H9R 4Z2

+1 514-428-8090
 Fax +1 514-428-8899
 E-mail: kobold@kobold.ca

Visit KOBOLD Online at www.kobold.com

Model: KPK



KOBOLD KPK series transducers are designed to provide unequalled levels of performance. Utilizing either thin film or piezoresistive technologies, the KPK offers high precision, shock resistance and extreme long term sensor stability. Noise immunity is assured by compliance with the IEC 801 standard (CE compliant) and installation is simplified by providing protection against common installation snafus such as reverse polarity wiring, overvoltage and short circuiting.

Use of a modern high quality manufacturing process makes it possible to offer these sensors at a surprisingly low price without compromising quality. All KOBOLD KPK sensors undergo 100% inspection and testing to guarantee a pleasant "out-of-the-box" experience.

#### **Features**

- Advanced thin film or piezoresistive sensing technology
- 4-20 mA output signal
- CE EMI compliant
- Absolute or Gauge measuring ranges
- High overpressure protection
- Fast response time
- Stainless steel construction
- Compact
- Easy-to-use Hirschmann connectors standard



## KOBOLD KPK Pressure Transducer

## **Specifications**

**Accuracy** 

Standard: ±0.5% of full scale Optional: ±0.25% of full scale

**Included Components** 

Repeatability: ±0.05% of full scale **Hysteresis:** ±0.1% of full scale Stability: ±0.2% full scale/yr

1/4" male NPT or Fittings:

7/16-20 SAE

**Materials of Construction** 

**Wetted Parts:** 316 SS Case: 304 SS

#### **Temperature Information**

Compensation: 32°F to 175°F Drift: ±0.03%/50°F Medium: -22°F to 212°F **Ambient:** 14°F to 175°F -40°F to 212°F Storage:

Shock Sensitivity: < ±0.05% full scale

@100g for 20 ms

Vibration Sensitivity:  $< \pm 0.05\%$  full scale @35g & 5-2000 Hz

## **Pressure Limitations**

5, 10, 7500-15000 PSI Ranges Proof Pressure: 1.5 x range Burst Pressure: 2 x range 15-6000 PSI Ranges

**Proof Pressure:** 2 x range Burst Pressure: 5 x range

#### **Electrical Data**

Output: 4-20 mA, 2-wire Adjustability: ±5% of span

**Input Power** 

Current Output: 12-30 VDC Voltage Output: 14-30 VDC Response Time: < 1 ms, 10-90% FS

Frequency Limit: 150 Hz

**Protection** 

**Environmental: NEMA 4X** 

Fault: Reverse polarity,

overvoltage, short

circuit

#### Applications

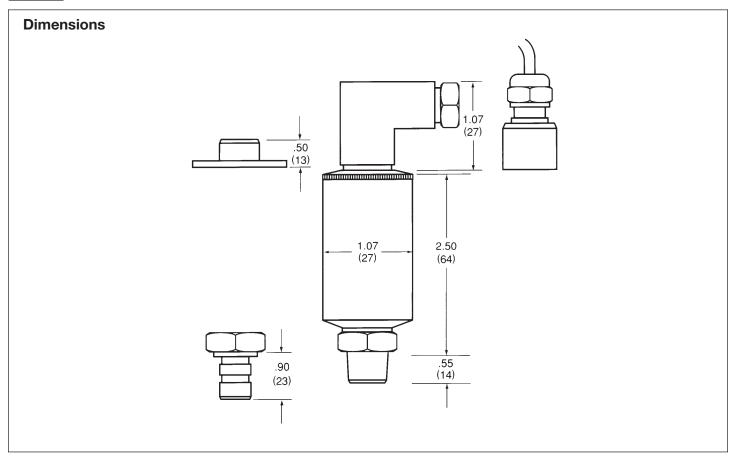
- Hydraulic & pneumatic systems
- Industrial machinery & machine tools
- Injection molding machines
- Stamping & forming presses
- Pumps & compressors
- Laboratory & test equipment
- Railroad equipment
- HVAC systems
- Refrigeration equipment



KPK Ordering Information														
KPK	= Comp	Compact High Precision Pressure Transducer												
	-Range	= Pr	= Pressure Range Abbreviation Available Measuring Ranges											
	<b>0030V</b> = -30 to 0" Hg <b>00005</b> = 5 PSIG <b>00300</b> = 300 PSIG							300 PSIG	05000	= 5000 PSIG	<b>0100A</b> = 100 PSIA			
		30/1	<b> 5</b> = -	30" H	lg to	15 PSIG	00010	= 10 PSIG	00500 =	500 PSIG	06000	= 6000 PSIG	<b>0150A</b> = 150 PSIA	
		30/3	<b>30</b> = -	30" H	lg to	30 PSIG	00015	= 15 PSIG	00600 =	600 PSIG	07500	= 7500 PSIG	<b>0200A</b> = 200 PSIA	
		30/6	<b>60</b> = -	30" H	lg to	60 PSIG	00030	= 30 PSIG	00750 =	750 PSIG	10000	= 10000 PSIG	<b>0300A</b> = 300 PSIA	
	30100 =			- 30" Hg to 100 PSIG			<b>00060</b> = 60 PSIG <b>010</b>			<b>1000</b> = 1000 PSIG <b>15000</b>		= 15000 PSIG		
30-			50 = -	30" H	lg to 1	50 PSIG	<b>00100</b> = 100 PSIG <b>01500</b> = 1500 PSIG			<b>0015A</b> = 15 PSIA				
	30200 =			30" H	lg to 2	00 PSIG	00150	= 150 PSIG	02000 =	2000 PSIG	0030A	= 30 PSIA		
	<b>30300</b> = -30" Hg to 300 PSIG <b>00200</b> = 200 PSIG <b>03000</b> = 3000 PSIG <b>0060A</b> = 60 PS								= 60 PSIA					
"		1	= ± 0.5% of full scale (standard) Accuracy											
		2	= ±	0.259	% of 1	full scale								
			1	= 4	-20 m	nA Outpu	ıt <b>2</b>	= 0-5 VI	OC 5	= 0-10 VI	DC	Output Signa	al	
				2	2 1/4" NPT (standard) Fittings									
	3 7/16 - 20 SAE #4													
					1	= 36" cable with Mini-Hirschmann connector Electrical Connections							ctions	
					2			Ni-plated a	•					
					3			Ni-plated a	,					
					6	= 1/2" NPT male conduit with 36" cable (polyurethane cladding) = Mini-Hirschmann with mating connector (standard)								
					7					ector (stand	lard)			
						D	= Surge	damping o	rifice			Options		
KDK *	90/CC	<b>Y</b>	¥	¥	¥	Å [		amenta KDI	( Con a a lift	Ala.				
KPK -30/60 -2 -1 -2 -7 -D Sample KPK Specification														
KP-12	24N	11/	,,,	Diaphragm Seals *  Tri clamp® diaphragm Seal with glycerine fill										
KP-12		2"		Tri clamp® diaphragm Seal with glycerine fill										
	KP-2002 SSG 3/4"						•	m Seal wit		fill				
KP-20	002 HB2F	3/4"	,	NPT Hastelloy B2 Flush diaphragm Seal with halocarbon fill										

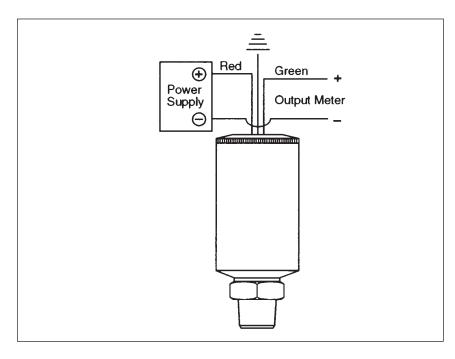
 $<sup>^{\</sup>star}$  Diaphragm Seals -usable on ranges 0-60 PSIG and higher.





# **Wiring Diagrams and Electrical Connections**

## 2 WIRE WIRING DIAGRAM EXAMPLE



100 Series	4-20mA 2 WIRE			
+ Supply	Red/A/1			
+ Output	Green/B/2			

Example: Red/A = Applicable color wire/bendix pin or din plug number.

## **Load Limitations 4-20mA Output**

#### Only

 $V_{min} = 10V + (.022 x R_L)$ 

R L = R s + R w

R<sub>L</sub> = Loop Resistance (ohms)

Rs = Sense Resistance (ohms)

Rw = Wire Resistance (ohms)