

Compact High Precision Pressure Transducer



measuring
•
monitoring
•
analyzing

KPK



- Advanced Thin-Film or Piezoresistive Sensing Technology
- 4-20 mA Output Signal
- CE EMI Compliant
- Compound, Absolute, or Gauge Measuring Ranges
- High Overpressure Protection
- Fast Response Time
- Stainless Steel Construction
- Easy to Use Hirschmann DIN Connector



KOBOLD companies worldwide:

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

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Description

The KOBOLD KPK Compact Pressure Transducer is designed to deliver high performance at an economical price. Utilizing either thin-film or piezoresistive technologies, the KPK series offers precision, shock resistance, and long term sensor stability. Noise immunity is assured by compliance with the IEC 801 standard (CE compliant). Installation is simplified by providing protection against common installation mistakes such as reverse polarity wiring, overvoltage and short circuiting. All KPK sensors undergo inspection and testing to assure a trouble-free installation. Common uses include: hydraulic and pneumatic systems, industrial machinery, injection molding machines, stamping and forming presses, pumps and compressors, laboratory equipment, railroad equipment, HVAC systems, and refrigeration equipment.

Specifications

Accuracy

- Standard:** ±0.5% of full scale BFSL
- Optional:** ±0.25% of full scale BFSL
- Repeatability:** ±0.05% of full scale BFSL
- Hysteresis:** ±0.1% of full scale BFSL
- Stability:** ±0.2% of full scale BFSL
- Fittings:** 1/4" Male NPT
or 7/16-20 SAE

Materials of Construction

- Wetted Parts:** 316 Stainless Steel
- Case:** 304 Stainless Steel

Temperature Details

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

Shock Sensitivity:

< ±0.05% Full Scale at 100g for 20 ms

Vibration Sensitivity:

< ±0.05% Full Scale at 35g and 5-2000 Hz

Pressure Limitations

5, 10, 7500-15000
PSI Ranges

- Proof Pressure:** 1.5 x Range
- Burst Pressure:** 2 x Range

15-6000 Range

- Proof Pressure:** 2 x Range
- Burst Pressure:** 5 x Range

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% Full Scale

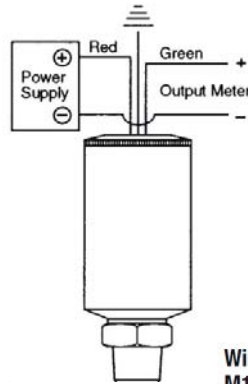
Frequency Limit:

150 Hz

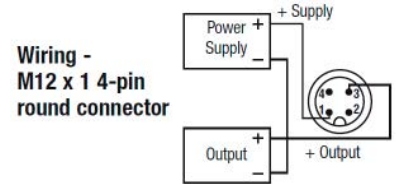
Protection

- Environmental:** NEMA 4X
- Fault:** Reverse Polarity, Overvoltage,
Short Circuit

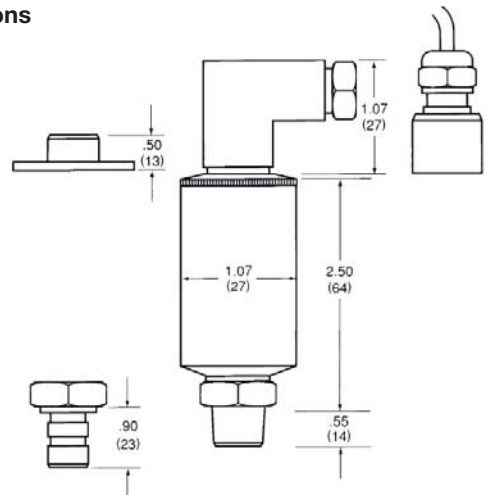
Wiring Diagram and Electrical Connections



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



Dimensions



Load Limitations: 4-20 mA Output

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

$$R_L = R_S + R_W$$

R_L = Loop Resistance (ohms)

R_S = Sense Resistance (ohms)

R_W = Wire Resistance (ohms)



KPK Ordering Information									
KPK-	= Compact, High Precision Pressure Transducer								
RANGE	0030V = -30"...0" Hg 30/15 = -30" Hg...15 PSIG 30/30 = -30" Hg...30 PSIG 30/45 = -30" Hg...45 PSIG 30/60 = -30" Hg...60 PSIG 30100 = -30" Hg...100 PSIG 30150 = -30" Hg...150 PSIG 30300 = -30" Hg...300 PSIG			Measuring Range 00060 = 60 PSIG 00100 = 100 PSIG 00150 = 150 PSIG 00200 = 200 PSIG 00300 = 300 PSIG 00500 = 500 PSIG 00600 = 600 PSIG 00750 = 750 PSIG 01000 = 1000 PSIG 01500 = 1500 PSIG 02000 = 2000 PSIG 03000 = 3000 PSIG			05000 = 5000 PSIG 06000 = 6000 PSIG 07500 = 7500 PSIG 10000 = 10000 PSIG 15000 = 15000 PSIG 0015A = 15 PSIA 0030A = 30 PSIA 0060A = 60 PSIA 0100A = 100 PSIA 0150A = 150 PSIA 0300A = 300 PSIA		
	Accuracy 1 = 0.5% of Full Scale (Standard) 2 = 0.25% of Full Scale								
	Output Signal 1 = 4-20 mA 2 = 0-5 VDC 5 = 0-10 VDC								
	Fitting 2 = 1/4" NPT (Standard) 3 = 7/16-20 SAE #4								
	Electrical Connection 1 = 36" Cable with Mini Hirschmann Connector 2 = 4-pin Bendix (Ni-plated Aluminum) 3 = 6-pin Bendix (Ni-plated Aluminum) 6 = 1/2" Male NPT Conduit with 36" Polyurethane-clad Cable 7 = Mini Hirschmann with Mating Connector (Standard) 25 = M12 x 1, 4-pin Micro-DC								
	Option D = Surge Damping Orifice								
	KPK -	00010	1	1	2	1	D		
	Sample KPK Part Number								
	Diaphragm Seals (Only for Ranges 0-60 PSIG and Higher)								
	KP-120215	=	1-1/2" Tri-Clamp Diaphragm Seal with Glycerine Fill						
KP-120220	=	2" Tri-Clamp Diaphragm Seal with Glycerine Fill							
KP-2002 SSG	=	3/4" NPT 316 SS Flush Diaphragm Seal with Glycerine Fill							
KP-2002 HB2H	=	3/4" Hastelloy B2 Flush Diaphragm Seal with Halocarbon Fill							

Accessory: Mating Electrical Cable for Electrical Connection 25

Description	Item #
Micro-DC, 4-pin 6 foot Cable	807.037
Micro-DC, 4-pin 16 foot Cable	807.037/5M