



KOBOLD Instruments Inc.  
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Series KP46  
 Explosion-Proof  
 Pressure Transducers

## Precautions

- **User's Responsibility for Safety:** KOBOLD manufactures a wide range of process sensors and technologies. While each of these technologies are designed to operate in a wide variety of applications, it is the user's responsibility to select a technology that is appropriate for the application, to install it properly, to perform tests of the installed system, and to maintain all components. The failure to do so could result in property damage or serious injury.
- **Wiring and Electrical:** Because this is an electrically operated device, only properly trained personnel should install and maintain this product. Be sure that the power supplied to the unit is appropriate for the electronics version supplied. Electrical wiring of the sensor **MUST** be performed in accordance with all applicable national, state and local codes **AND** in accordance with the most recent version of the National Electric Code ANSI/NFPA 70 (NEC) Articles 500 through 505.
- **Make a Fail-Safe System:** Design a fail-safe system that accommodates the possibility of sensor, relay or power failure. In critical applications, KOBOLD recommends the use of redundant backup systems and alarms in addition to the primary system.
- **Hazardous Location Approval:** CSA approved to standards CSA 30 and U.L. 1203, Explosion-Proof for Class 1, Div 1 Groups A, B, C, D and Div. 2 Groups A, B, C, D for use in Hazardous Areas
- - ANSI/ISA 12.27.01-2003 Single Seal Approved
- - CE EN61326 as per CECV, Canadian Electrical Code Variance



Explosion-Proof

## Specifications:

Available Ranges: 0-50 through 0-20000 PSIG  
 Over Range Protection: 2X full scale  
 Burst Pressure: 5X full scale  
 Cycle Life: >100 million cycles  
 Process Connection: 1/4" MNPT (to 10K PSIG),  
 1/2" MNPT (15K & 20K PSIG)  
 Wetted Materials: 316 L Stainless Steel  
 others available upon request  
 Corrosion Resistance: Complies with NACE MR0175  
 Linearity: ±0.25% BFS  
 Zero Offset: <±1% of full scale  
 Span Tolerance: <±2% of full scale  
 Media Temp Range: -55 to +250°F  
 Ambient Temp Range: -40-185°F  
 Compensated Range: 30 to 130°F  
 Temp. Drift: <±1.5% of full scale for zero  
 and span over the compensated range  
 Shock Resistance: 100G, 11mSec.  
 Vibration Resistance: 10G peak, 20-2000Hz  
 Stability (1 year): ±0.25% of full scale

## Electrical Specifications:

Output: 4-20 mA, 2-wire  
 Input Power Supply: 10-28 VDC  
 Max. Loop Load: 800 Ohms  
 Elec. Connection: 1/2" NPT Conduit with 6 Ft. 18 AWG wire leads  
 Elec. Protection: NEMA 4X / IP 66

## Wiring Connections:

**CAUTION: BE SURE THAT POWER IS DISCONNECTED BEFORE PROCEEDING!**

4-20 mA, 2-wire Output

Red: +V Supply (10-28VDC)  
 Black: + Signal Output (4-20mA)  
 Green: Case/Equipment Ground

## Installation:

1. Mount the transmitter so that the sensor port will not become clogged with sediment or debris that could hamper the sensing ability.
2. Although the transmitter is highly vibration resistant, it is always good practice to mount the device appropriately to minimize any potentially damaging shock and vibration.
3. Apply PTFE tape, or other appropriate thread sealant to the NPT pressure fitting thread before installation. Tighten the device using the 7/8" Hex next to the pressure connection. **DO NOT USE A PIPE WRENCH ON THE TRANSMITTER HOUSING!**

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**KOBOLD Instruments, Inc.**  
**Standard Electrical Connections For Model KPD and KP46**

**Cable**

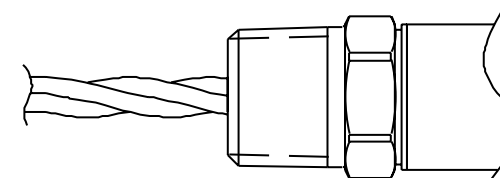
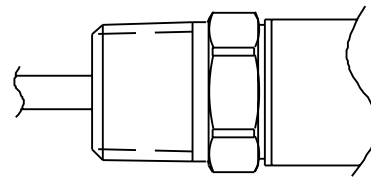
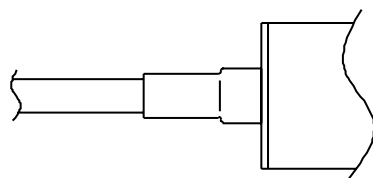
	mV	Voltage			4-20mA
		0.5-4.5V ratiometric	1-5V, 1-6V, 0-5V	0-10V, 1-10V	
Supply Voltage	5VDC typ., 10VDC max.	5VDC ± 0.01V	10-28VDC	15-28VDC	10-28VDC
Output Load	>1 MΩ	>10 KΩ	>10 KΩ	>10 KΩ	0-800Ω
Operating Temperature	-40 to 105°C	-40 to 85°C	-40 to 85°C	-40 to 85°C	-40 to 85°C

Cable / Hookup Wire Connections
Electrical Connection option
Gauge Wire
Available on KOBOLD Models:

Standard Cable
"A, B, C, D"
24 AWG
KPD

Conduit with Cable
"L, M, N, P"
24 AWG
KPD

Explosionproof Conduit with Cable
"T, U, W"
18 AWG
KP46



Cable / Hookup Wire Connections
Output Type
mV & 4-Wire Voltage
3 Wire Voltage
4-20 mA

Standard Cable			
Green	Black	Red	White
+S	Ground	+V	-S
N/C	Ground	+V	S
N/C	Ground	+V	N/C

Conduit with Cable			
Green	Black	Red	White
+S	Ground	+V	-S
N/C	Ground	+V	S
N/C	Ground	+V	N/C

Explosionproof Conduit with Cable			
Green	Black	Red	White
N/A	N/A	N/A	N/A
Case	Ground	+V	S
Case	Ground	+V	N/C

S= Output Signal  
 V= Voltage Supply  
 N/C= Not Connected  
 Case= Case Ground

Order from: **C A Briggs Company**

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