

⚠ WARNING! READ ⚠ BEFORE INSTALLATION

1. GENERAL:

A failure resulting in injury or damage may be caused by excessive overpressure, excessive vibration or pressure pulsation, excessive instrument temperature, corrosion of the pressure containing parts, or other misuse. Consult Ashcroft Inc., Stratford, Connecticut, USA before installing if there are any questions or concerns.

2. OVERPRESSURE:

Pressure spikes in excess of the rated overpressure capability of the transducer may cause irreversible electrical and/or mechanical damage to the pressure measuring and containing elements.

Fluid hammer and surges can destroy any pressure transducer and must always be avoided. A pressure snubber should be installed to eliminate the damaging hammer effects. Fluid hammer occurs when a liquid flow is suddenly stopped, as with quick closing solenoid valves. Surges occur when flow is suddenly begun, as when a pump is turned on at full power or a valve is quickly opened.

Liquid surges are particularly damaging to pressure transducers if the pipe is originally empty. To avoid damaging surges, fluid lines should remain full (if possible), pumps should be brought up to power slowly, and valves opened slowly. To avoid damage from both fluid hammer and surges, a surge chamber should be installed.

Symptoms of fluid hammer and surge's damaging effects:

- Pressure transducer exhibits an output at zero pressure (large zero offset).
- Pressure transducer output remains constant regardless of pressure
- In severe cases, there will be no output.

FREEZING:

Prohibit freezing of media in pressure port. Unit should be drained (mount in vertical position with electrical termination upward) to prevent possible overpressure damage from frozen media.

3. STATIC ELECTRICAL CHARGES:

Any electrical device may be susceptible to damage when exposed to static electrical charges. To avoid damage to the transducer observe the following:

- Ground the body of the transducer BEFORE making any electrical connections.
- When disconnecting, remove the ground LAST!

Note: The shield and drain wire in the cable (if supplied) is not connected to the transducer body, and is not a suitable ground.

DESCRIPTION

The Ashcroft Model KD41 pressure transducer is a high performance instrument intended for use in applications where the process media is compatible with 304 SS/PH17-4 or all 316L SS (Range dependent).

MECHANICAL INSTALLATION

Environmental

The KD41 transducer can be stored within a temperature limit of -40°C to 125°C (-40°F to 257°F) and operated within a temperature limits of -40°C to 105°C (-40°F to 221°F). IP67 (ingress protection) rating applies for most configurations depending on electrical connection, install accordingly.

Mounting

The KD41 transducer requires no special mounting hardware and can be mounted in any orientation with negligible position error. Although the units can withstand considerable vibration without damage or significant output effects, it is always good practice to mount the transducer where there is minimum vibration. For units with NPT type pressure fittings apply sealing tape or an equivalent sealant to the threads before installing. When installing or removing the unit apply a wrench to the hex wrench flats, located above the pressure fitting. DO NOT tighten by using a pipe wrench on the housing. A 22mm wrench can be used on the wrench flats of the hex (as per DIN 894 or similar) with a tightening torque of ~25Nm (20 ft. lbs.). For KD41 transducer with detachable electrical connectors a 6-point deep socket can also be used to install the unit.

Electro-Magnetic Interference

The circuitry of the KD41 transducer is designed to minimize the effect of electromagnetic and radio frequency interference. To minimize susceptibility to noise, avoid running the termination wiring in a conduit which contains high current AC power cables. Where possible avoid running the termination wiring near inductive equipment.

Field Adjustments

The KD41 transducer is precisely calibrated and temperature compensated at the factory to ensure long and stable performance. There are no field accessible adjustments on the KD41 transducer

ELECTRICAL INSTALLATION

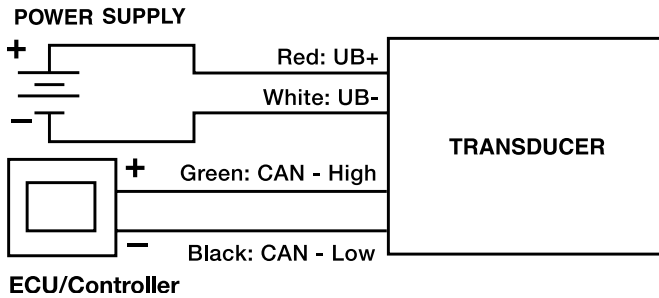
Please refer to the reverse of this page for power supply requirements and for appropriate wiring protocol based on the particular output signal and electrical termination features of the unit being installed.

KD41 PRESSURE TRANSDUCER INSTALLATION INSTRUCTIONS



KD41 ELECTRICAL INSTALLATION

Typical Wiring Diagrams



KD41 POWER SUPPLY REQUIREMENTS

Output Signal	Min. Supply	Max. Supply
J1939 & CANopen	9Vdc	32Vdc

KD41 ELECTRICAL TERMINATIONS AND WIRING

Connections

Plug M12x1	Cable port
Power 1: UB+ 2: Can-High 3: UB- 4: CAN-Low	Power Red: UB+ Black: UB- White: CAN-High Green: CAN-Low

The electrical connection must be made in accordance with the respective connection diagram unless otherwise agreed upon.