**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.

3. **STATIC ELECTRICAL CHARGES:**
Any electrical device may be susceptible to damage when exposed to static electrical charges. To avoid damage to the transducer the operator/installer should follow proper ESD (electrostatic discharge) protection procedures before handling the pressure transducer.

**Description:**
Congratulations on your purchase of the Ashcroft® Model DXLdp low differential pressure transducer. The DXLdp utilizes the same highly reliable variable capacitance sensor used in traditional Ashcroft XLdp family of low differential transducers. A selection of both unidirectional and bi-directional pressure ranges are offered, accuracy of 1%, 0.5% and 0.25% and a wide assortment of output signals.

The DIN rail-mounting package offers a new and efficient use of mounting space for enclosure mount applications. Optional features such as the SpoolCal™ process valve actuator, LED’s with front access test jacks and 2:1 Turn down provide added value when validating a process on line or in diagnostic indication. Not to be used for calibration reference. This feature includes front access test jacks for uninterrupted signal reference.

**Options**
The three options available include LED (XDL), SpoolCal™ (XPV) and 2:1 Turn down (X21).

**OPTION: LED RANGE INDICATION (XDL)**
Provides a quick visual in/out of range status or diagnostic indication. Not to be used for calibration reference. This feature includes front access test jacks for uninterrupted signal reference.

<table>
<thead>
<tr>
<th>LED INDICATION</th>
<th>TYPICAL ACCURACY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amber</td>
<td>±3% on nominal zero</td>
</tr>
<tr>
<td>Zero Pressure</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>Beyond ±3% to ±106% of range</td>
</tr>
<tr>
<td>In Range Pressure</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>Beyond ±106% of range</td>
</tr>
<tr>
<td>Out of Range Pressure</td>
<td></td>
</tr>
</tbody>
</table>

**Power requirements:**
The DXLdp is wired (3 wire) (2 wire) for Voltage and Current output respectively. Reference Drawing #2.

**Voltage Output**
The DXLdp will operate on any supply voltage from 12-36Vdc drawing less than 10mA in full function LED variations (24Vdc typical).

**Current Output**
The voltage required for a 4-20mA output is dependent on the loop resistance of the circuit. Refer to Drawing #3 showing the minimum supply voltage (Vmin) required for a given Loop Resistance (RL).

**Front Access Test Jacks:**
Provides on-line process reference signal or calibration signal without disconnecting power supply wiring. Measurements can be made using a standard multi-meter or data collection instrument. Contact the factory for more information on the Ashcroft ATE handheld calibrator. Reference signals through the test jacks are made in series for 4-20mA output and in parallel for voltage output. Gold plated contacts accept standard 0.08” microtip test leads, snapping in place for secure measurements.
MODEL DXLdp DIFFERENTIAL PRESSURE TRANSUDCER OPERATING & INSTRUCTION SHEET

### ELECTRICAL CONNECTIONS

**OPTION: SPOOLCAL™ (XPV)**

The rotating process valve actuator in conjunction with the SpoolCal™ actuator tool provides two types of tests including Calibrate (CAL) and Monitor (MON) through the appropriate Hi and Lo Port of the SpoolCal actuator tool. In the (CAL) mode the DXLdp is isolated from the process and allows externally generated test pressure input for calibration. In the (MON) mode the system pressures can be monitored with an Ashcroft ATE Calibrator or other handheld instrument without physically unplugging the process tubes. In this mode an on-line measurement can be captured. In conjunction with the (XDL) option, a reference signal can also be captured without process interruption.

The (XPV) option supplies a SpoolCal™ actuator tool and 7” of silicon tubing. The actuator tool identifies the above positions and tests, including high (HI) and low (LO) differential pressure reference. From the (OFF) position the SpoolCal™ actuator tool can be inserted and removed. The following tests can be performed:

**Calibration (CAL):**

Both zero and Span adjustment pots are non-interactive and accessible from the front of the unit. 

*Note:* Due to the sensing technology used rarely are actual zero and span adjustments needed. Zero and span pots are available on the basic unit. Requires XDL and XPV options.

- *Insert SpoolCal™ actuator tool.*
- *A 90-degree clockwise rotation isolates the DXLdp from the process.*
- *Apply zero pressure. This can be best produced by shorting the HI and LO ports on the SpoolCal™ actuator tool using the silicon tubing supplied.*
- *Verify or make zero adjustment.*
- *An external pressure generator can be used to produce the required span pressure. Verify or make span adjustment.*
- *Measure record signal via front access test jacks, option (XDL).*

**Monitor (MON):**

Provides on line or uninterrupted measurement point capability when XPV option is again selected in combination with the (XDL) option, including the front access test jacks.

- *Insert SpoolCal™ actuator tool*
- *A 90-degree counterclockwise rotation tee's the process to both the DXLdp sensor and out through the SpoolCal™ actuator tool, to provide external measurement or recording capabilities.*

**OPTION: 2:1 TURN DOWN (X21)**

Provides optional in field scalability via internal jumpers.

*Example:* Given a 1.0” DXLdp with 4-20mA output. The unit can be adjusted to operate full scale at 0.5”. In addition, the 4-20mA reference output remains in calibration.

*Steps (Following instructions on label):*

1. Lay unit on right side. Remove reusable left side label.
2. Pry off access door and discard.
3. Using needle nose pliers or twisters, move jumper from top to bottom position.
4. Reattach label.
5. Reverse range label on face of unit.

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**Current Output**

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Current Output
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**Voltage Output**

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

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Load Limitations 4-20mA Output
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**Drawing #3**

Load Limitations 4-20mA Output

```
Loop Resistance (Ω)
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