**ATTENTION! READ BEFORE INSTALLATION**

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.

**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 transducing elements. Fluid hammer and surges can destroy any pressure transducer and must always be avoided. A pressure sensor should be isolated to eliminate the damaging hammering effects. Fluid hammer occurs when a liquid flow is suddenly stopped, as with quick closing solenoid valves. Surges occur when flow is suddenly turned on or off 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, flow lines should be purged fully (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 of zero pressure (large zero offset).
- Pressure transducer output remains constant regardless of pressure.

- In worst cases, there will be no output.

**SYMPTOMS OF FLUID HAMMER AND SURGES:**
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All sales subject to standard terms and conditions of sale. E2 PRESSURE TRANSDUCER INSTALLATION MANUAL

BEFORE INSTALLATION

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**E2 PRESSURE TRANSMITTER, TYPICAL DIMENSIONS AND CONSTRUCTION**

**DESCRIPTION**

The Ashcroft E2™ is ideal for a broad range of pressure sensing requirements found in general and heavy industrial applications as well as applications in test and measurement. The E2 offers a wide variety of material, process and electrical connections to meet your application requirements. It is designed for use with both liquids and gases and it provides on the absolute and differential connected and highly indexed output. This is achieved through the use of an on board microprocessor that is programmed during a unique digital compression process to provide an extremely linear performance over the entire specified pressure range.

**SPECIFICATIONS**

- **Reference condition:** 70 °F (21 °C)
- **Accuracy:** ±0.50% or ±1.00% of Span Terminal Point ± terminal point linearity, full range or ±0.75% of Span (zero offset and span adjustment can be adjusted in these cases, the device should be calibrated with an electrical output first).
- **Environmental conditions:**
  - **Temperature:** 0 to 70 °C
  - **Humidity:** 0 to 95% RH, non-condensing
  - **Vibration:** Random: 0.13g @ 10-150Hz, ±1° @ 10Hz
  - **Altitude:** 0 to 2000m
  - **Power Connections:**
    - **V Supply:** 14-36 Vdc
    - **Rloop:** 0.5 V-4.5 Vdc
    - **RSENSE:** 0.1 V-5 Vdc
    - **Rrange:** 0.1-5 Vdc, 0.1-20 Vdc

**E2 PRESSURE TRANSMITTER, TYPICAL ELECTRICAL CONNECTIONS**

**Power Supply Requirements**

<table>
<thead>
<tr>
<th>Source</th>
<th>E2G</th>
<th>3 Wire Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Output</td>
<td>0.1-5 Vdc</td>
</tr>
<tr>
<td>14-36 Vdc</td>
<td>1200</td>
<td>1-11 Vdc</td>
</tr>
<tr>
<td>0.5-4.5 Vdc</td>
<td>681.818181</td>
<td>8-12 Vdc</td>
</tr>
</tbody>
</table>

**Installation and Assembly**

- **Process connection:**
  - **The electrical connection of the device shall be programmed during a unique digital compression process to provide an extremely linear performance over the entire specified pressure range.**
  - **Linear performance over the entire specified pressure range.**
- **Power Upper Response Time:** 100 ms
- **Power Supply Voltage:** 0-10 Vdc / 0-11 Vdc / 0-12 Vdc
- **Supply Current (mA):** 3-10
- **Response Time (Output):** 4 max 8 max
- **Power Supply Range: Full Range 90V Vac / 36V DC
- **Offset and Span adjustments**
  - **1.** WARNING: Disconnect the E2G Transducer from the control panel prior to performing offset and span adjustments.
  - **2.** The E2G should be powered on before adjusting to ensure that the device is at its zero point before any adjustment is performed.
  - **3.** The E2G is programmed to be within ±0.1% of its额定值 before the transducer is connected to the power supply. Once the transducer is connected, it will drive from over range to under range.
  - **4.** At the offset pressure record output offset system to be used in the span adjustment in step 4. 0 to 10 Vdc will be displayed. This will allow you to adjust the span of the output to match the 0 to 10 Vdc range of the full scale.
  - **5.** Tap the resistor to the specified area on the E2G label. Adjust span to desired span value plus or minus 20% of full scale. 0 to 10 Vdc will be displayed. This will allow you to adjust the span of the output to match the 0 to 10 Vdc range of the full scale.
- **Accessories:** Superseal, 3-Pin Packard.