The Series DH Digihelic® Differential Pressure Controller is a 3-in-1 instrument possessing a digital display gage, control relay switches, and a transmitter with current output. Combining these three features allows the reduction of several instruments with one product, saving inventory, installation time and money. The Digihelic® Controller is the ideal instrument for pressure, velocity and flow applications, achieving a 0.5% full scale accuracy on ranges from 5 to 100 in w.c. The Digihelic® Controller allows the selection of pressure, velocity or volumetric flow operation in several commonly used engineering units. Two SPDT control relays with adjustable deadbands are provided along with a scalable 4-20 mA process output. The Series DH provides access flexibility in power usage by allowing 120/208 VAC and also 24 VDC power which is often used in control panels.

Programming is easy using the menu key to access five simplified menus which provide access to: security level; selection of pressure, velocity or flow operation; selection of engineering units; & factor for use with flow sensors; rectangular or circular duct for inputting area in flow applications; set point control or set point and alarm operation; alarm operation as a high, low or high/low alarm; automatic or manual alarm reset; alarm delay; view peak and valley process readings; digital damping for smoothing erratic process operation; scaling the 4-20 mA process output to fit your application’s range; Modbus® communications; and field calibration.

With all this packed into one product it is easy to see why the Digihelic® Controller is the only instrument you will need for all your pressure applications.

### Available Pressure Engineering Units

<table>
<thead>
<tr>
<th>Model</th>
<th>in w.c.</th>
<th>ft w.c.</th>
<th>mm w.c.</th>
<th>cm w.c.</th>
<th>psi</th>
<th>in Hg</th>
<th>mm Hg</th>
<th>mbar</th>
<th>Pa</th>
<th>kPa</th>
<th>hPa</th>
<th>oz/in²</th>
</tr>
</thead>
<tbody>
<tr>
<td>DH-002</td>
<td>2.500</td>
<td>6.350</td>
<td>6.035</td>
<td>0.635</td>
<td>0.467</td>
<td>0.623</td>
<td>62.28</td>
<td>4.4 oz</td>
<td>0.623</td>
<td>0.144</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DH-004</td>
<td>1.000</td>
<td>25.40</td>
<td>2.540</td>
<td>0.254</td>
<td>1.868</td>
<td>2.491</td>
<td>249.1</td>
<td>0.249</td>
<td>2.491</td>
<td>0.078</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DH-006</td>
<td>5.000</td>
<td>127.0</td>
<td>12.70</td>
<td>1.270</td>
<td>9.342</td>
<td>12.45</td>
<td>1245</td>
<td>1.245</td>
<td>12.45</td>
<td>2.890</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DH-007</td>
<td>10.00</td>
<td>.8333</td>
<td>254.0</td>
<td>25.40</td>
<td>3678</td>
<td>5109</td>
<td>510.9</td>
<td>5.109</td>
<td>23.17</td>
<td>0.578</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DH-008</td>
<td>25.00</td>
<td>2.083</td>
<td>635.0</td>
<td>63.50</td>
<td>9032</td>
<td>1245</td>
<td>1245</td>
<td>7.356</td>
<td>294.9</td>
<td>6.277</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DH-009*</td>
<td>50.00</td>
<td>4.167</td>
<td>1270</td>
<td>127.0</td>
<td>1.806</td>
<td>2.491</td>
<td>249.1</td>
<td>1.245</td>
<td>12.45</td>
<td>294.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DH-010*</td>
<td>100.00</td>
<td>8.333</td>
<td>2540</td>
<td>254.0</td>
<td>3.613</td>
<td>5.09</td>
<td>509</td>
<td>2.491</td>
<td>249.1</td>
<td>57.80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bi-Directional** Ranges also available:

| DH-012 | Range: 0.25 - 0.25 in w.c. |
| DH-014 | Range: 1.0 - 1.0 in w.c. |
| DH-015 | Range: 2.5 - 2.5 in w.c. |

**OPTIONS**

Barbed fitting for 3/16” ID tubing -BB

For NIST traceable calibration certificate, add suffix -NIST to model numbers. Example DH-004-NIST.

For factory calibration certificate, add suffix -FC to model numbers. Example DH-004-FC.

**ACCESSORIES**

The Mother Node® and Mini-Node™ converters are an easy solution for utilizing the Digihelic® Controller’s RS-485 serial communication and connecting to virtually any PC.

MN-1, Mini-Node® USB/RS-485 converter

351-9, Mother Node® silver RS-232 to RS-485 Converter with DB9F Connector. Includes 120 VAC to 12 VDC adapter

A-266, Digihelic® surface mounting bracket

A-203, 1/8” ID x 1/4” OD PVC tubing

Digihelic Links™, Communication Software

See page 587 for process tubing options.

---

**SPECIFICATIONS**

**Service:** Air and non-combustible, compatible gases.

**Wetted Materials:** Consult factory.

**Housing Material:** ABS plastic, UL approved 94-V-0.

**Accuracy:** ±0.5% at 77°F (25°C) including hysteresis and repeatability.

**Stability:** < ±1% per year.

**Pressure Limits:** Ranges ≤ 2.5 in w.c.

  - 2 psi: 5”; 5 psi: 10”; 5 psi: 25”; 5 psi: 50”; 5 psi: 100”; 9 psi.

**Temperature Limits:** 32 to 140°F (0 to 60°C).

**Compensated Temperature Limits:** 32 to 140°F (0 to 60°C).

**Thermal Effects:** 0.020°F/F (0.036°C/F) from 77°F (25°C).

**Power Requirements:** High voltage power = 100 to 240 VAC, 50 to 400 Hz or 132 to 240 VDC. Low voltage power = 24 VDC ±20%.

**Power Consumption:**

- High voltage: 24 VDC ±20%.
- Low voltage: ±0.5% at 77°F (25°C)

**Stability:** ±0.1% per year.

**Thermal Effects:** 0.020°F/F (0.036°C/F) from 77°F (25°C).

**Output Signal:** 4-20 mA DC into 900 Ω max.

**Zero & Span Adjustments:**

- Accessible via menus.
- Response Time: 250 ms.
- Display: 4 digit LCD 0.4” height. LED indicators for set point and alarm status.

**Electrical Connections:** Screw terminals.

**Process Connections:** Compression fitting for use with 1/8” ID X 1/4” OD tubing (3.175 mm ID x 6.35 mm OD). Optional barbed fitting for 3/16” ID tubing.

**Enclosure Rating:** Face designed to meet NEMA 4X (IP66).

**Mounting Orientation:** Mount unit in horizontal plane.

**Size:** 1/8 DIN.

**Panel Cutout:** 1.772 x 3.620 in (45 x 92 mm).

**Weight:** 14.4 oz (408 g).

**Serial Communications:** Modbus®, RTU, RS485, 9600 baud.

**Agency Approvals:** CE, UL.

**SWITCH SPECIFICATIONS**

**Switch Type:** 2 SPDT relays.

**Electrical Rating:** 8 amps at 240 VAC resistive.

**Set Point Adjustment:** Adjustable via keypad on face.

**Modbus®** is a registered trademark of Schneider Automation, Inc.