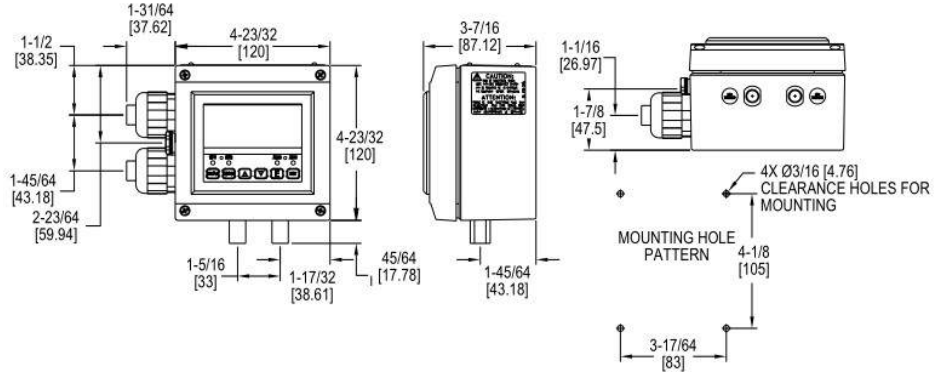


# DIGIHELIC® II DIFFERENTIAL PRESSURE CONTROLLER

NEMA 4 (IP66) Housing With Large, Bright LCD, Square Root Output for Flow

CALIBRATION SERVICES AVAILABLE



The Series DHII Digihelic® II Differential Pressure Controller takes all the features of the standard Digihelic® pressure controller and packages them in a robust NEMA 4 (IP66) housing.

The Digihelic® II pressure controller combines the 2 SPDT control relays, 4-20 mA process output and Modbus® communications with a large, brightly backlit 4 digit LCD display that can easily be seen from long distances. The electrical wiring has also been enhanced in the DHII with its detachable terminal blocks. The removable terminals allow the install to easily wire the terminal block outside the housing and then attach to the circuit board, reducing wiring difficulties and installation time on the process.

The Digihelic® II differential pressure control in the NEMA 4 (IP66) enclosure enables this product to be the perfect choice when mounting pressure controls outdoors in such applications as rooftop air handlers. This housing also makes it the ideal solution for surface mounting in clean rooms or facilities where water or a cleaning solution is utilized in maintaining plant cleanliness.

**BENEFITS/FEATURES**

- NEMA 4 housing enables a range of uses both outdoors or indoors where water is present
- Large backlight LCD display provides local reading from a distance
- Detachable terminal blocks reduce wiring difficulties saving installation time

**APPLICATIONS**

- Air handlers
- Clean rooms

**SPECIFICATIONS**

**Service:** Air and non-combustible, compatible gases.  
**Wetted Materials:** Consult factory.  
**Housing Material:** Aluminum, glass.  
**Accuracy:** ±0.5% at 77°F (25°C) including hysteresis and repeatability (after 1 hour warm-up).  
**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 (0.036%/°C) from 77°F (25°C).  
**Power Requirements:** High voltage power = 100-240 VAC, 50 to 400 Hz or 132-240 VDC; Low voltage power = 24 VDC ±20%.  
**Power Consumption:** Low voltage power = 24 VDC - 130 mA max; High voltage power = 100-240 VAC, 132-240 VDC - 7 VA max.  
**Output Signal:** 4-20 mA DC into 900 Ω max.  
**Zero and Span Adjustments:** Accessible via menus.  
**Response Time:** 250 ms (dampening set to 1).  
**Display:** 4 digit backlit LCD 0.6" height. LED indicators for set point and alarm status.  
**Electrical Connections:** Euro type removable terminal blocks with watertight conduit fittings for 1/2" watertight conduit.  
**Process Connections:** 1/8" female NPT.  
**Enclosure Rating:** Designed to meet NEMA 4 (IP66).  
**Mounting Orientation:** Mount unit in horizontal plane.  
**Weight:** 2 lb 10 oz (1.19 kg).  
**Serial Communications:** Modbus® RTU, RS485, 9600 baud.  
**Compliance:** 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.

**MODEL CHART - AVAILABLE PRESSURE ENGINEERING UNITS**

Model	in w.c.	ft w.c.	mm w.c.	cm w.c.	psi	in Hg	mm Hg	mbar	Pa	kPa	hPa	oz/in <sup>2</sup>
DHII-002	.2500	-	6.350	0.635	-	-	0.467	0.623	62.28	-	0.623	0.144
DHII-004	1.000	-	25.40	2.540	-	-	1.868	2.491	249.1	0.249	2.491	0.578
DHII-006	5.000	.4167	127.0	12.70	.1806	.3678	9.342	12.45	1245	1.245	12.45	2.890
DHII-007	10.00	.8333	254.0	25.40	.3613	.7356	18.68	24.91	2491	2.491	24.91	5.780
DHII-008	25.00	2.083	635.0	63.50	.9032	1.839	46.71	62.27	6227	6.227	62.27	14.45
DHII-009*	50.00	4.167	1270	127.0	1.806	3.678	93.42	124.5	-	12.45	124.5	28.90
DHII-010*	100.0	8.333	2540	254.0	3.613	7.356	186.8	249.1	-	24.91	249.1	57.80

\*Velocity and volumetric flow not available on bi-directional range units and models DHII-009 and DHII-010.

**MODEL CHART - BI-DIRECTIONAL\* RANGES**

Model	Range
DHII-012	0.25 to 0 to 0.25 in w.c.
DHII-014	1.0 to 0 to 1.0 in w.c.
DHII-015	2.5 to 0 to 2.5 in w.c.
DHII-016	5 to 0 to 5 in w.c.
DHII-017	10 to 0 to 10 in w.c.

\*Velocity and volumetric flow not available on bi-directional range units and models DHII-009 and DHII-010.

**ACCESSORIES**

Model	Description
A-301	Static pressure tip for 1/4" metal tubing connection
A-302	Static pressure tip for 3/16" and 1/8" I.D. plastic or rubber tubing
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16" ID rubber or plastic tubing; 4" insertion depth; includes mounting screws
A-438	Surface mounting brackets
A-489	4" straight static pressure tip with flange
DIGIHELIC LINKS™	Communications software
MN-1	Mini-Node™ USB/RS-485 converter

**OPTIONS**

Use order code:	Description
-NIST	NIST calibration certificate

Modbus® is a registered trademark of Schneider Electric USA, Inc.  
 Process Tubing Options: See page 453 (Gage Tubing Accessories)