



SERIES DH3 | DIGIHELIC® DIFFERENTIAL PRESSURE CONTROLLER



Note: Shown with optional -SS bezel.
Backward compatible with Magnehelic® gage.

FEATURES/BENEFITS

- A low differential pressure gage, switch & transmitter combination instrument allows for local display, high/low alarm monitoring and connectivity to building automation systems
- Full scale accuracy of 1.5% or better even on extremely low ranges, and 0.5% for ranges above 5 in w.c. provide for greater measurement precision
- A reliable controller to measure low differential pressure, velocity or flow applications
- Secure menu program provides access to device operation only for the right skill level
- Optional stainless steel bezel is the same installation diameter as Magnehelic® gage and simplifies field upgrade to DH3 pressure controller

APPLICATIONS

- Cleanroom monitoring
- Filter status
- Duct or building static pressure
- Damper and fan control

DESCRIPTION

The **Series DH3 Digihelic® Differential Pressure Controller** is a 3-in-1 instrument possessing a digital display gage, control relay switches, and a transmitter with current output all packed in the popular Photohelic® gage style housing. Combining these 3 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 1% full scale accuracy on ranges down to the extremely low 0.25 in w.c. to 2.5 in w.c. full scale. Ranges of 5 in w.c. and greater maintain 0.5% FS accuracy. Bi-directional ranges are also available.

The Series DH3 Digihelic® controller allows the selection of pressure, velocity or volumetric flow operation in several commonly used engineering units. 2 SPDT control relays with adjustable deadbands are provided along with a scalable 4-20 mA process output.

Programming is easy using the menu key to access 5 simplified menus which provide access to: security level; selection of pressure, velocity or flow operation; selection of engineering units; K-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 reading; digital damping for smoothing erratic process applications; scaling the 4-20 mA process output to fit your applications range and field calibration

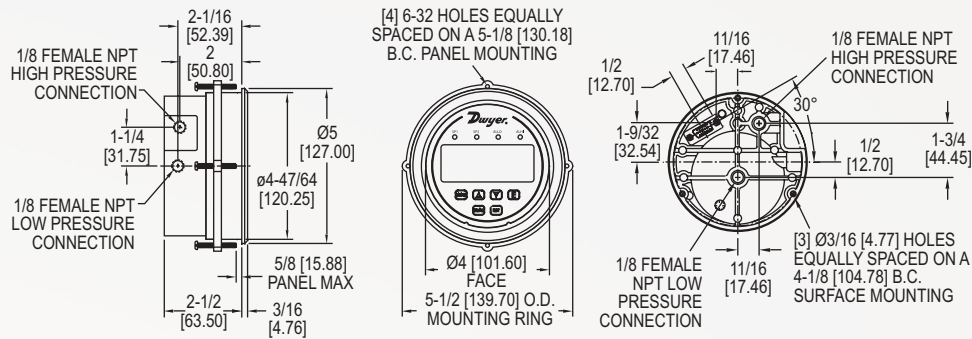
SPECIFICATIONS

Service	Air and non-combustible, compatible gases.
Wetted Materials	Consult factory.
Housing Material	Die cast aluminum case and bezel.
Accuracy	±1.5% for 0.25 in and ±0.25 in w.c. ranges. Ranges 0.5 to 5 in w.c. and corresponding bi-directional (except ±2.5 in w.c.) ±1%; All other ranges: ±0.5% @ 77°F (25°C) including hysteresis and repeatability (after 1 hour warm-up).
Stability	< ±1% per year.
Pressure Limits	Ranges (uni- and corresponding bidirectional), ≤ 1 in w.c.: 9 psi; 2.5 and 5 in w.c.: 1.5 psi; 10 in w.c.: 3 psi; 25 in w.c.: 8 psi; 50 in w.c.: 15 psi; 100 in w.c.: 20 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). For 0.25 in and ±0.25 in w.c. ranges: ±0.03%/°F (±0.054%/°C).
Power Requirements	12-28 VDC, 12-28 VAC 50 to 400 Hz.
Power Consumption	3 VA max.
Output Signal	4-20 mA DC into 900 Ω max.
Zero & Span Adjustments	Accessible via menus.
Response Time	250 ms (damping set to 1).
Display	Backlit 4 digit LCD 0.4" height LED indicators for set point and alarm status.
Electrical Connections	15 pin male high density D-sub connection. 18" (46 cm) cable with 10 conductors included.
Process Connections	1/8" female NPT. Side or back connections.
Mounting Orientation	Mount unit in vertical plane.
Size	5" (127 mm) OD x 3-1/8" (79.38 mm). For -SS Bezel 4-3/4" OD (120.7 mm) x 2-21/32" (67.5 mm).
Weight	1.75 lb (794 g).
Agency Approvals	CE.

SWITCH SPECIFICATIONS

Switch Type	2 SPDT relays.
Electrical Rating	1 A @ 30 VAC/VDC.
Set Point Adjustment	Adjustable via keypad on face.

DIMENSIONS



HOW TO ORDER

Use the **bold** characters from the chart below to construct a product code.

SERIES	DH3	-004	-SS	
DH3 - Digihelic® differential pressure controller				
RANGE				OPTIONS
002: 0 to 0.25 in w.c.		011: 0 to 100 in w.c.		AT: Aluminum tag
003: 0 to 0.5 in w.c.		013: 0 to ±0.25 in w.c.		COO: Certificate of origin
004: 0 to 1 in w.c.		014: 0 to ±0.50 in w.c.		FC: Factory calibration
005: 0 to 2.5 in w.c.		015: 0 to ±1.00 in w.c.		NIST: NIST traceable calibration certificate
006: 0 to 5 in w.c.		016: 0 to ±2.50 in w.c.		SS: Brushed 304 stainless steel bezel
007: 0 to 10 in w.c.		017: 0 to ±5.00 in w.c.		ST: Stainless steel tag
009: 0 to 25 in w.c.		018: 0 to ±10.0 in w.c.		
010: 0 to 50 in w.c.				

ACCESSORIES

Model	Description
A-298	Flat aluminum bracket for flush mounting
A-301	Static pressure tip, for 1/4" metal tubing connection
A-302	Static pressure tip, for 3/16" and 1/8" ID plastic or rubber tubing
A-302F-A	303 SS Static pressure tip with mounting flange, for 3/16" I.D. rubber or plastic tubing. 4" insertion depth, includes mounting screws
A-370	Flush mount bracket. Bracket is then surface mounted. Steel with gray hammertone epoxy finish
A-489	4" 303 SS straight static pressure tip with flange

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dwyer-inst.com/Product/SeriesDH3



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DS-DH3 Rev. 2

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