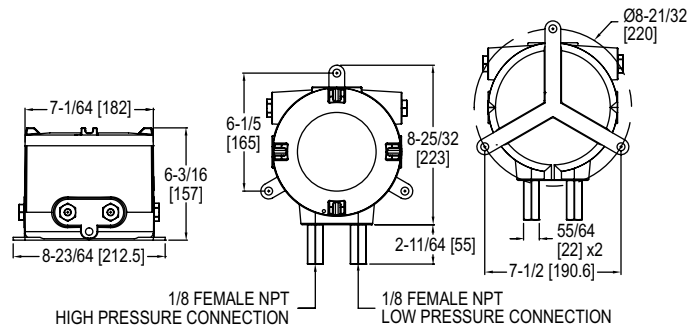


# ATEX/IECEX APPROVED DIGIHELIC® DIFFERENTIAL PRESSURE CONTROLLER

## Digihelic® Pressure Control in Flameproof ATEX/IECEX Enclosure



AT-102NA-DH3, shown with VS0 port/valve configuration

The Series AT-DH3 ATEX/IECEX Approved 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 hazardous area pressure, velocity and flow applications by allowing for the selection of pressure, velocity or volumetric flow operation in several commonly used engineering units. Two SPDT control relays with adjustable dead bands are provided along with a scalable 4-20 mA process output. In velocity or flow modes, a square root output is provided on the 4-20 mA signal to coincide with the actual flow curve. Flameproof enclosures are available in aluminum and can include a glass window for viewing process information and set point status on the digital display.

**BENEFITS/FEATURES**

- Saves inventory, installation time, and money by consolidating several instruments into one ATEX/IECEX approved product
- Flameproof enclosure with optional glass window and aluminum housing protects the device in hazardous areas while giving local visibility to process pressure and set point status
- Increased response time at low pressures with LD port configuration

**APPLICATIONS**

- Hazardous area pressure measurement and switching

**Attention:** Check local safety rules and warnings on unit and manual for a correct use of the instrument in hazardous areas.

PRESSURE LIMITS		
Port/Valve	One Pressure Port Connected	Both Pressure Ports Connected
VS0	10 kPa	10 kPa
VL0	10 kPa	10 kPa
VS1	20 kPa	15 kPa
VS2	40 kPa	20 kPa
VL1	20 kPa	15 kPa

**SPECIFICATIONS**

**Service:** Air and non-combustible, compatible gases.  
**Wetted Materials:** Consult factory.  
**DH3 Housing Material:** Die cast aluminum case and bezel.  
**Housing Material:** Aluminum.  
**Finishing:** Texture epoxy coat RAL7015.  
**Accuracy:** ±1.5% for 0.25 in w.c. and ±0.25 in w.c ranges. Ranges 0.5 in w.c. 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:** See pressure limit chart.  
**Temperature Limits:** 32 to 140°F (0 to 60°C) (Note: Product temperature limits differ from case).  
**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 and Span Adjustments:** Accessible via menus in safe zone only.

**Response Time:** 250 ms (damping set to 1). Without considering delay caused by Exd flame arrestors (up to 30 s from FS to zero depending model and ranges with STD pressure ports) about 15 s with LD pressure ports on very low ranges.  
**Display:** Backlit 4-digit LCD 0.4" height LED indicators for set point and alarm status.  
**Process Connections:** 1/8" NPT female brass (SS optional).  
**Electrical Connections:** Two 1/2" NPT female. Cable gland not included.  
**Electrical Wiring:** Screw terminal.  
**Mounting Orientation:** Mount unit in vertical plane.  
**Enclosure Rating:** IP66 (IP65 for versions VS1, VS2, VL1).  
**Dial Size:** 5" (127 mm) OD x 3-1/8" (79.38 mm).  
**Weight:** 12.3 lb (5.6 kg).  
**ATEX Certificate:** EPT 19 ATEX 3192 X.  
**Agency Approvals:** ATEX compliant: CE 0477 II 2G Ex db IIC T5, T6 Gb -60°C ≤Ta ≤+50°C (T6) -60°C ≤Ta ≤+60°C (T5) II 2D Ex tb IIIC T75 °C Db IECEX Compliant: Ex db IIC T5, T6 Gb -60°C ≤Ta ≤+50°C (T6) -60°C ≤Ta ≤+60°C (T5) Ex tb IIIC T75°C Db.

**SWITCH SPECIFICATIONS**  
**Switch Type:** 2 SPDT relays.  
**Electrical Rating:** 1 A @ 30 VAC/VDC.  
**Set Point Adjustment:** Adjustable via keypad on face in safe zone only.

MODEL CHART											
Example	AT	-102NA	-DH3	-002	-W	1	VS0	12	AT-102NA-DH3-002-W1VS012		
Enclosure	AT								ATEX/IECEX approved enclosure		
Housing Material		102NA							Aluminum enclosure		
Series			DH3						DH3 differential pressure controller		
Range				002					0-0.25 in w.c. (0-62.2 Pa)		
				003					0-0.5 in w.c. (0-124.5 Pa)		
				004					0-1 in w.c. (0-249.1 Pa)		
				005					0-2.5 in w.c. (0-622.7 Pa)		
				006					0-5 in w.c. (0-1245 Pa)		
				007					0-10 in w.c. (0-2491 Pa)		
				009					0-25 in w.c. (0-6227 Pa)		
				010					0-50 in w.c. (0-12.45 KPa)		
				011					0-100 in w.c. (0-24.91 KPa)		
				013					0.25-0-0.25 in w.c. (62.2-0-62.2 Pa)		
				014					0.5-0-0.5 in w.c. (124.5-0-124.5 Pa)		
				015					1-0-1 in w.c. (249.1-0-249.1 Pa)		
				016					2.5-0-2.5 in w.c. (622.7-0-622.7 Pa)		
				017					5-0-5 in w.c. (1245-0-1245 Pa)		
				018					10-0-10 in w.c. (2491-0-2491 Pa)		
Cover						B W			Blind Glass window		
Port/Valve Material							1 2		Brass SS		
Port/Valve Configurations								VS0 VL0 VS1 VS2 VL1	STD port/no valve LD port/no valve STD port/STD valve STD port/LD valve LD port/LD valve		
Cable Entry								12	1/2" NPT ANSI/ASME B1.20.1		

USA: California Proposition 65