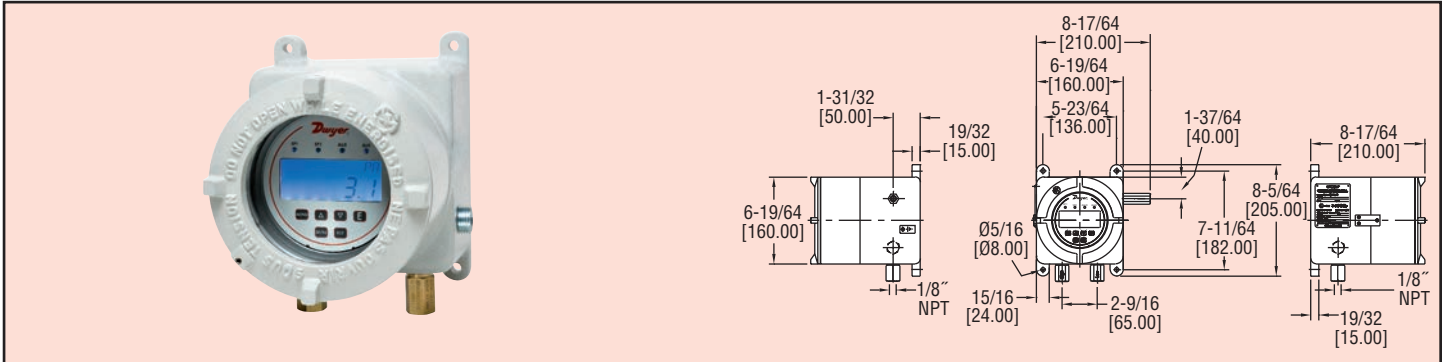




Series  
AT2DH3

# ATEX Approved DH3 Differential Pressure Controller

Digihelic® Pressure Control in Flame-Proof ATEX Enclosure



The ATEX approved **Series AT2DH3 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 ATEX approved 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 to 20 mA process output. In velocity or flow modes, a square root output is provided on the 4 to 20 mA signal to coincide with the actual flow curve.

Flame-proof ATEX enclosures are available in aluminum and can include a glass window for viewing process information and set point status on digital display.

**Important notes for installation:**

- Cables must be fitted through 1/2" NPT cable gland or ATEX conduit (not supplied with instrument).
- Make sure after cabling to close tight cover and cable gland, in order to keep IP66 rating (IP65 with option OPV, overpressure relief valve).
- Open cover only after de-energizing instrument.
- **Attention:** Check local safety rules and warnings on unit and manual for a correct use of the instrument in hazardous area.

**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 RAL7038.
- Accuracy:** < 5 in w.c. (except ±2.5 in w.c.): ±1%; All other ranges: ±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.: 25 psi; ±2.5", 5 in w.c.: 5 psi; 10 in w.c.: 5 psi; 25 in w.c.: 5 psi; 50 in w.c.: 5 psi; 100 in w.c.: 9 psi.
- Temperature Limits:** 32 to 140°F (0 to 60°C) Case: -58 to 140°F (-50 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).

- Power Requirements:** 12 to 28 VDC, 12 to 28 VAC 50 to 400 Hz.
- Power Consumption:** 3 VA max.
- Output Signal:** 4 to 20 mA DC into 900 ohms max.
- Zero & Span Adjustments:** Accessible via menus in safe zone only.
- Response Time:** 250 ms (damping set to 1).
- 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). In presence of acetylene it is necessary to use SS.
- Electrical Connections:** Two 1/2" NPT female. Cable gland not included.
- Weight:** 12.3 lb (5.6 kg).
- Electrical Wiring:** Screw terminal.
- Mounting Orientation:** Mount unit in vertical plane.
- Enclosure Rating:** (IP66). IP65 with option OPV, overpressure relief valve.
- Dial Size:** 5" (127 mm) OD x 3-1/8" (79.38 mm).

**ATEX Approved Products from Comhas with ECN:** NEMKO 10ATEX1096.

**Agency Approvals:** CE 0470 Ex II2 GD Ex d IIC Gb T6; -50°C ≤ Ta ≤ +60°C Ex tb IIIC Db T 85°C.

**SWITCH SPECIFICATIONS**

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

<b>Series</b>	AT2DH3						
<b>Range</b>	-002						0 to 0.25 in w.c.
	-003						0 to 0.5 in w.c.
	-004						0 to 1 in w.c.
	-005						0 to 2.5 in w.c.
	-006						0 to 5 in w.c.
	-007						0 to 10 in w.c.
	-009						0 to 25 in w.c.
	-010						0 to 50 in w.c.
	-011						0 to 100 in w.c.
	-013						0.25 to 0 to 0.25 in w.c.
	-014						0.5 to 0 to 0.5 in w.c.
	-015						1 to 0 to 1 in w.c.
	-016						2.5 to 0 to 2.5 in w.c.
	-017						5 to 0 to 5 in w.c.
	-018						10 to 0 to 10 in w.c.
<b>Housing Material</b>			-A				Aluminum
<b>Cover</b>				B			Blind
				O			Glass top cover
<b>Process Connection</b>					1		1/8" NPT F brass ports
					2		1/8" NPT F SS ports
<b>Overpressure Plug</b>					X		Standard without overpressure relief valve
					OPV		Overpressure relief valve
							Material same as port
<b>Tag</b>						T2	SS information label