



AT-102-DH3 AT-102S-DH3

Explosion-Proof ATEX/IECEX Exd
DigiHelic® differential pressure controller

NEW

Now available
with Low DP
pressure ports.
Improved
response time.



DH3
transmitter/controller
now available from
Comhas as single
instrument
Atex/IECEX
approved

3 in 1,
digital display gage,
control relay switches
and transmitter

Ideal instrument
for pressure,
velocity and
flow applications

ATEX

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
Certificate: EPT 19 ATEX 3192 X

IECEX

Ex db IIC T5, T6 Gb -60°C ≤Ta ≤+50°C (T6)
-60°C ≤Ta ≤+60°C (T5)

Ex tb IIIC T75°C Db
Certificate: IECEX EUT 19.0014X

Specifications

Service:	air and compatible clean and dry gases.
Wetted parts:	consult factory.
DH3 case:	die cast aluminum case and bezel.
Temperature limits:	DH3 [®] : from 0 to 60°C (32 to 140°F). case: -76 to 140°F (-60 to 60°C)* T5 (-60 to 50°C) T6
Accuracy:	± 1.5 % for 0.25 in and ±0.25 in w.c ranges. Ranges 0.5 in 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 repeability (after 1 hour warm-up).
Stability:	< ±1% per year.
Pressure limits:	Pls check table 2
Compensated temperature limits:	from 0 a 60°C (32 to 140°F).
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 50-400 Hz.
Power consumption:	3 VA max.
Output signal:	4-20 mA, max 900 ohm.
Zero & span adjustments:	accessible via menus (possible only in safe area).
Response time:	250 ms (damping set to 1). Without considering delay caused by Exd flame arrestors (up to 30 sec. from full scale to zero depending model and ranges with STD pressure ports) about 15 sec. with LD pressure ports on very low ranges.
Display:	backlit 4 digit LCD 0.4" height LED indicators for set point and alarm status.
Installation:	diaphragm in vertical position.
Dial size:	5" (127 mm).
Housing material:	alluminium (stainless steel option).
Finishing:	Grey - texture epoxy coat RAL7015 (aluminum case) Blue - RAL 5015 (top cover)
Electrical wiring:	screw terminal.
Electrical connection:	2 x 1/2" NPT F standard (supplied without cable gland).
Enclosure rating:	IP66 (IP 65 for versions VS1-VS2-VL1)
Process connections:	1/8" female NPT brass (stainless steel optional).
Dimensions:	see drawing below.
Weight:	from 6,0 to 16 kg

Switth specification

Switch type: 2	Relays SPDT.
Rating relay:	1A @ 30 Vac/Vdc.
Set point adjustment:	adjustable via keypad on face (possible only in safe zone).

* Operating ambient temperature is defined also according to the options and pressure instrument choosed.

CAUTION FOR USE ONLY WITH AIR OR COMPATIBLE GASES! CONTACT FACTORY FOR USE WITH GASES, OTHER THAN AIR AND NITROGEN.

IMPORTANT NOTES FOR INSTALLATION:

Cables must be fitted through 1/2" NPT cable gland or Atex/IECEx conduit (not supplied with instrument).

Make sure after cabling to close tight cover and cable gland, in order to keep IP66 rating (only without venting valve).

Open cover only after de-energising instrument.

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

1. Model configuration

CODE	AT-102			-	DH3	-										
Enclosure extension	Enclosure without extension	N														
	Enclosure with extension	n/a														
Case material	Aluminum		A													
	Stainless steel		S													
Dwyer model	DH3				DH3											
Ranges	0-0.25" w.c. (0-62.2 Pa)										002					
	0-0.5" w.c. (0-124.5 Pa)										003					
	0-1" w.c. (0-249.1 Pa)										004					
	0-2.5" w.c. (0-622.7 Pa)										005					
	0-5" w.c. (0-1245 Pa)										006					
	0-10" w.c. (0-2491 Pa)											007				
	0-25" w.c. (0-6227 Pa)											009				
	0-50" w.c. (0-12.45 KPa)											010				
	0-100" w.c. (0-24.91 KPa)											011				
	0.25-0-0.25" w.c. (62.2-0-62.2 Pa)											013				
	0.5-0-0.5" w.c. (124.5-0-124.5 Pa)											014				
	1-0-1" w.c. (249.1-0-249.1 Pa)											015				
	2.5-0-2.5" w.c. (622.7-0-622.7 Pa)											016				
	5-0-5" w.c. (1245-0-1245 Pa) (only VS1-VS2-VL1)											017				
	10-0-10" w.c. (2491-0-2491 Pa) (only VS2 with one port connected)											018				
	Range non standard											XXX				
Cover	Blind											B				
	Glass window											W				
Pressure port / venting valve material	Brass											1				
	Stainless steel											2				
* Pressure port/venting valve (check table 2 based on max static pressure)	STD pressure port / no venting valve												VS0			
	LD pressure port / no venting valve												VL0			
	STD pressure port / STD venting valve												VS1			
	STD pressure port / LD venting valve												VS2			
	LD pressure port / LD venting valve												VL1			
Cable entry	1/2" NPT ANSI/ASME B1.20.1													12		
Other options	Stainless steel tag															

n/a: NOT AVAILABLE

2. Max static pressure admitted - Pressure ports and venting valve configuration

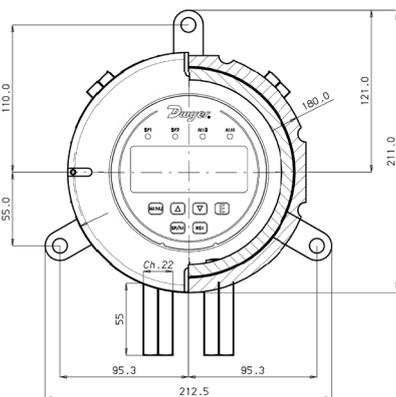
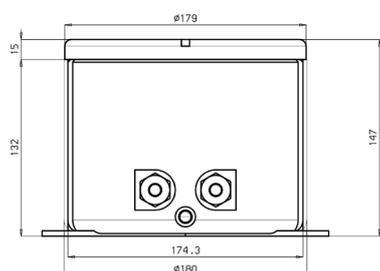
		Simplified scheme of pressure port / breathing device (venting valve)				Maximum pressure value with:	
						only one pressure port connected	both pressure ports connected
Code	VS0	PRESSURE PORTS	STD	Enclosure breathing device (venting valve)	None	10 kPa	10 kPa
	VL0		LD		None	10 kPa	10 kPa
	VS1		STD		STD	20 kPa	15 kPa
	VS2		STD		LD	40 kPa	20 kPa
	VL1		LD		LD	20 kPa	15 kPa

* Pls note that ranges: ±2,5", 5", 10", 25", 50" w.c have anyway max pressure up to 5 Psi (34,4 KPa)

Stainless steel case

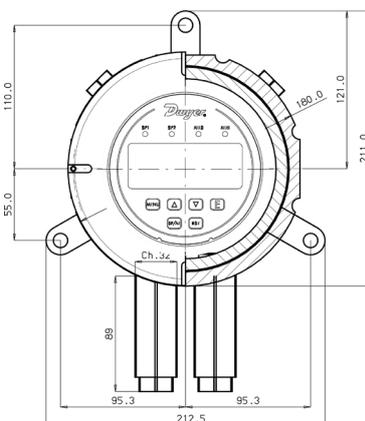
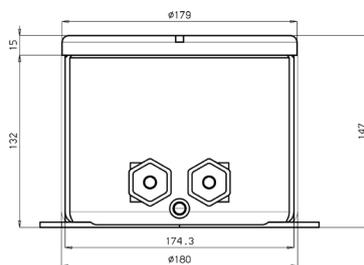
VSO

STD pressure port/no venting valve



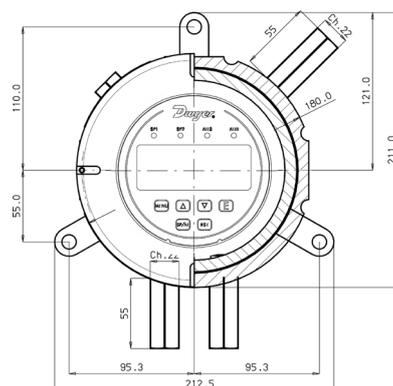
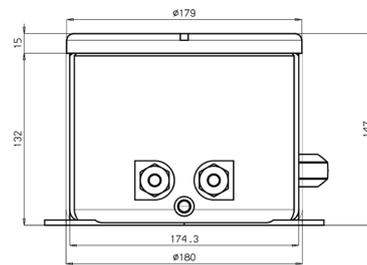
VL0

LD pressure port/no venting valve



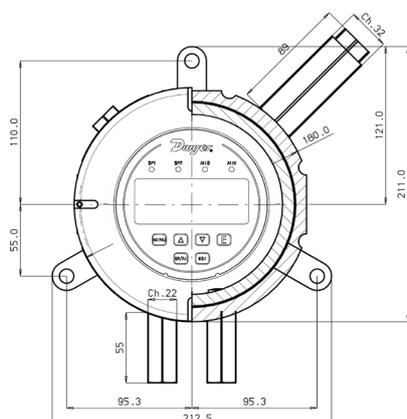
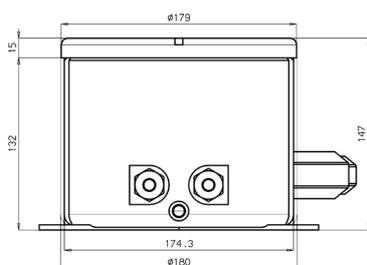
VS1

STD pressure port/STD venting valve



VS2

STD pressure port/LD venting valve



VL1

LD pressure port/LD venting valve

