



COMHAS

AT-101-DHC

AT-102S-DHC

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

NEW

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



DHC
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 0080

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: INERIS 21 ATEX 0033 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 INE 21.0064X

Specifications

Service:	air and compatible clean and dry gases.
Wetted parts:	consult factory.
DHC case:	die cast aluminum case and bezel.
Temperature limits:	DHC°: from -20 to 70°C (-4 to 158°F). case: -76 to 140°F (-60 to 60°C)* T5 (-60 to 50°C) T6
Accuracy:	±0.5% FSO for all ranges, except 0.5 in w.c. @ ±1% FSO, and ranges at or below ±0.25 in w.c. @ ±1.5% FSO
Stability:	<±1% per year FSO
Pressure limits:	Pls check table 2
Thermal effects:	0.020% /°F (0.036/°C) from 77°F (25°C).
Power requirements:	12-28 Vdc, 12-28 Vac 50-400 Hz.
Power consumption:	3 VA max.
Output signal:	4-20 mA (4-wire); 0-10 V, 0-5 V, 1-5 V, and 2-10 V (4-wire).
Communication:	BACnet MS/TP or Modbus ® RTU.
Supported Baud Rate:	9600, 19200, 38400, 57600, 76800, 115200
Device Load:	1/8 unit load.
Zero & span adjustments:	accessible via menus (possible only in safe area).
Response time:	400 ms (damping set to 0). 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 LCD display, LED setpoint indicators
Installation:	Vertical position.
Dial size:	5 " OD (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 4,8 to 16 kg(SS version)

Swith 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).

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-101 AT-102 (only for stainless steel material version)			-	DHC	-		-						
Enclosure extension	Enclosure without extension	N												
	Enclosure with extension	n/a												
Case material	Aluminum		A											
	Stainless steel		S											
Dwyer model	DHC					DHC								
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)							006						
	0-5" w.c. (0-1245 Pa)							008						
	0-10" w.c. (0-2491 Pa)							009						
	0-25" w.c. (0-6227 Pa)							010						
	0-50" w.c. (0-12.45 KPa)							011						
	0-100" w.c. (0-24.91 KPa)							012						
	0-60 Pa							053						
	0-125 Pa							055						
	0-250 Pa							056						
	0-6 mm H2O							082						
	0-25 mm H2O							084						
	±0.25" w.c. (±62.2 Pa)							202						
	±0.5" w.c. (±124.5 Pa)							203						
	±1" w.c. (±249.1 Pa)							204						
	±2.5" w.c. (±622.7 Pa)							206						
	±5" w.c. (±1245 Pa)							208						
	±10" w.c. (±2491 Pa)							209						
	±60 Pa							253						
	±125 Pa							255						
	±250 Pa							256						
	±6 mm H2O							282						
	±25 mm H2O							284						
	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													

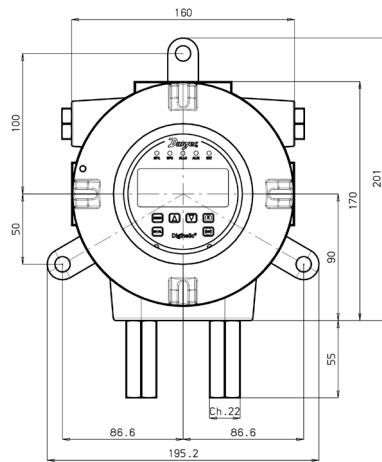
2. Max static pressure admitted - Pressure ports and venting valve configuration

		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

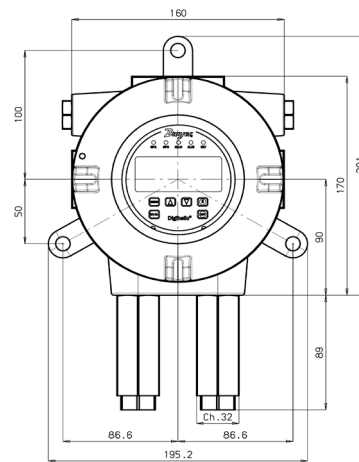
* if using following ranges: 002/003/004/202/203/053/055/056/082/084/282/284/253/255 , max static pressure allowed is 24,8 KPa

Aluminum case

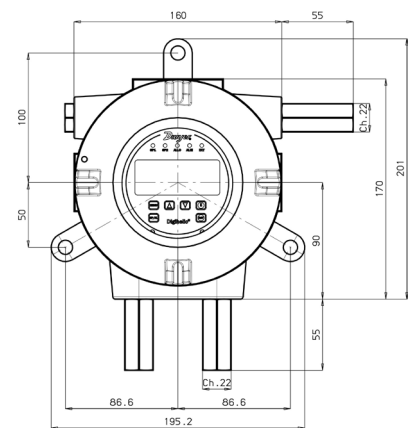
STD pressure port/no venting valve



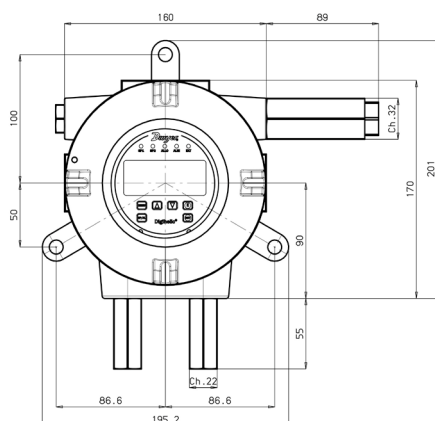
LD pressure port/no venting valve



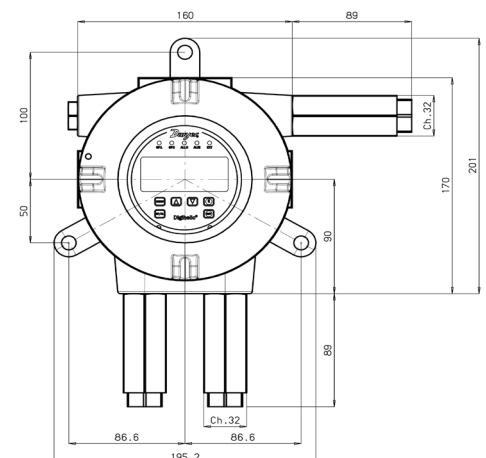
STD pressure port/STD venting valve



STD pressure port/LD venting valve



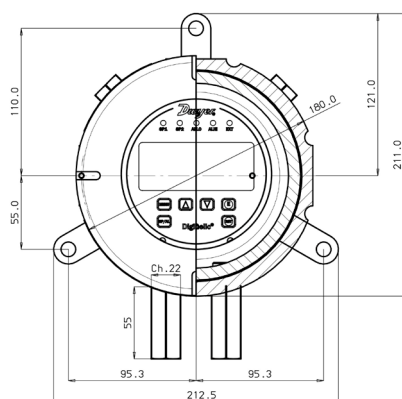
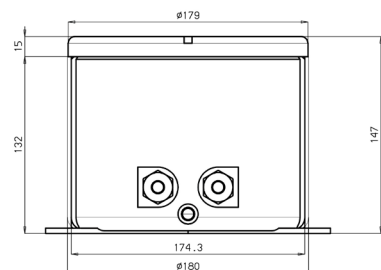
LD pressure port/LD venting valve



Stainless steel case

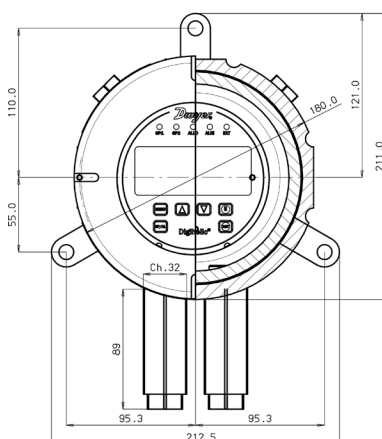
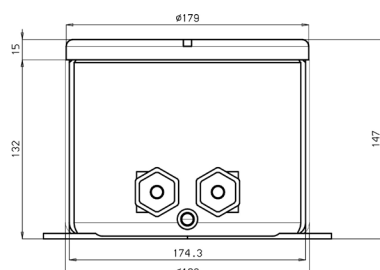
VS0

STD pressure port/no venting valve



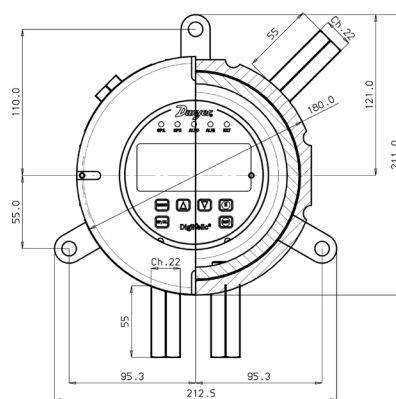
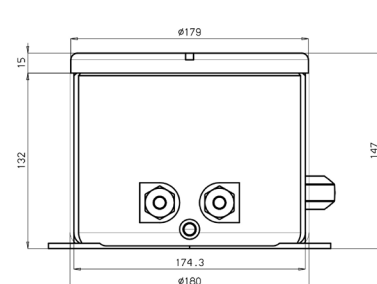
VL0

LD pressure port/no venting valve



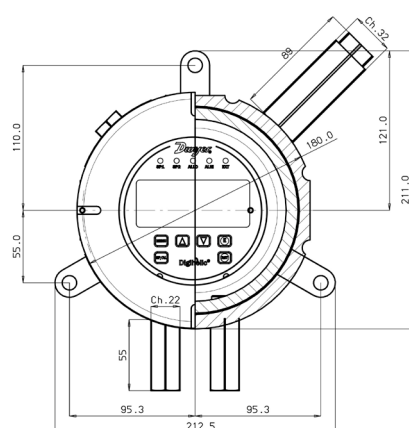
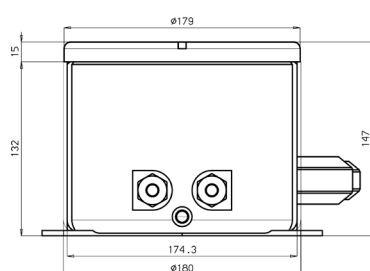
VS1

STD pressure port/STD venting valve



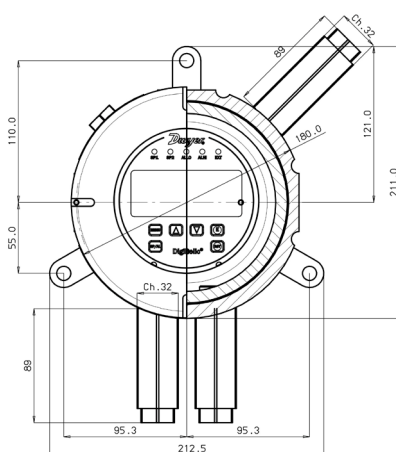
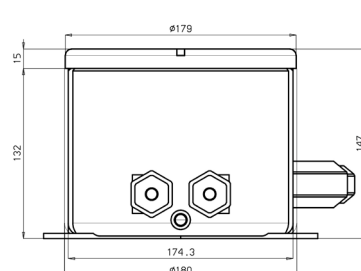
VS2

STD pressure port/LD venting valve



VL1

LD pressure port/LD venting valve



Available in the Benelux at:



Hitma B.V. | Anton Philipsweg 1 | 1422 AL Uithoorn | Nederland | KvK Amsterdam 33202361 | Tel. +31(0)297 - 514 833
Vestiging België | Brusselstraat 51 | 2018 Antwerpen | Tel. +32(0)2 - 387 2864