A Higher Level of Performance



Data Sheet

Series DP-4000

Differential Pressure Transmitters "All Stainless Steel"



For more information, please visit > www.hawkmeasure.com





Description

The DP-4000 is a high-performance differential pressure transmitter with a compact and robust Stainless steel electronics housing.

The calibration / programming can be done very easy without test pressure by using the Unique One Touch programming button together with the Graphic display with backlight.

The multilingual graphic display can indicate a number of chosen engineering units including the process temperature as well as the mA output in a bargraph.

Damping times can be adjusted and a 4-20 mA current simulation can be performed. For flow measurement a square root function is built-in with adjustable cut off point.

The output is 4-20 mA including HART® protocol (HART® 7.0). ATEX 🚱 II1G Ex ia IIC T6 Ga and IECEx approvals are available.

Features

- Stainless steel housing
- Easy adjustable without test pressure by 1 button
- Accuracy: 0.075%, option: 0.065%
- Turn down up to: 100:1

- Graphic Display with bargraph and backlight
- HART[®] Protocol (HART[®] 7)
- Development according to SIL2
- Diaphragm seals available





HART® is a registered trademark of the HART Communication Foundation.

Stainless steel electronics housing

Series DP-4000



Specifications

Accuracy :	0.075% (option: 0.065%)
Ranges :	0-10 mbar to 0 – 20 bar
Turn down :	up to 100:1
Adjustment :	by One push button and local
	display, without test pressure
Output :	4-20 mA + HART® Protocol
	(version 5.0 and 7.0)
Supply :	12 – 36 Vdc
Electrical housing :	AISI 304 (Option: AISI 316)
Protection :	IP66/67 (option IP68)
Process temperature :	-20°C to 80°C (option: 100°C)
Ambiant temperature :	-20°C to 70°C
Material wetted parts :	AISI 316L (option: Hastelloy C)
Material diaphragm :	AISI 316L
	(option: Hastelloy C, Tantalum or Gold plated)
Material sensor gasket	: Viton/FKM (standard), PTFE or NBR
Process connection :	1/4 - 18 NPT female
Option :	1/2" NPTf (by oval flanges)

Adjustable points

P101	Zero adjustment (ZERO / 4 mA)
P102	Span adjustment (SPAN / 20 mA)
P103	Cancel mounting position effect
P104	Adjustment pressure unit
P105	Output 4-20 mA* or 20-4 mA
P106	Damping adjustment (0 - 25 sec.)
P107	Language: English*, Dutch, German, French, Russian or Polish
P108	Safety adjustment, Alarm and backlight
P109	Read out on display: Current, pressure unit, temp. or %.
P110	Current simulation (4-20 mA)
P111	Linearisation (various tankshapes)
P112	Burst mode (with option HART®)
P113	Instrument information
P114	Flow / Square root

*= Factory setting

Graphic display with bargraph and backlight

Multilingual: English, Dutch, German, French, Spanish, Russian and Polish



Unique 'One Touch Programming Button'

The series DP-4000 is carried out with a unique control button. This 'single button' can be used for all programming / calibration functions.











Dimensions in mm (inch)

Separate electronics housing

Series DP-4000 is also available in a separate version. Type: DP-4000-Cable(...m)-range-... Always specify the cable length, range etc.

DP-Level Measurement in closed tanks

For DP level measurement in closed pressurized tanks a DP-4000 with separate diaphragm seals is available.

A tank linearization can be programmed very easy.

The standard tank shapes are:

- · Horizontal tank with flat end or parabolic end
- · Vertical tank with a spherical bottom or conical bottom

*For level measurement in open (non-pressurized) tanks please use other HAWK Level transmitters, i.e. Series 8000-SAN (0.2%), series 2000-SAN (0.1%) or series 4000-SAN (0.075%).



Flow measurement of liquids, gases or steam with Orifice plate or Pitot tube. $\sqrt{(SQUARE ROOT)}$



Wetted parts AISI 316L including vent valves.



DP-4000 with oval flanges (option)



Ordering codes Series DP-4000

Series DP- 4000	Ordering co	de: DP-4000 -											
ACCURACY CLASS:													
0,075 % (standard)				S									
0,065 % H				Н									
RANGE:	TD	MIN SPAN:	MAX SPA	N:									
60 mbar	6:1	10 mbar	60 mbar		A								
400 mbar	40:1	10 mbar	400 mbar		В	1							
2.0 bar	100:1	20 mbar	2000 mba	ar	С								
20 bar	100:1	0,2 bar	20 bar		D								
STATIC PRESSURE (MAX.):													
160 bar (standard)						S							
250 bar (only for range B, C an	id D)					Н							
DIAPHRAGM MATERIAL	/ BODY MAT	ERIAL:											
AISI 316 L (standard)	AISI 316L						S						
Hastelloy C 276	AISI 316L						Н						
Tantalum	AISI 316L						Т						
Gold plated on SST 316L	AISI 316L						G						
FILL FLUID DIAPHRAGM													
Silicone oil (standard)								S					
Fluorinated oil								F					
GASKET (PROCESS / DIAPH	RAGM)												
Viton (FKM) (standard)									V				
Teflon (PTFE)									Т				
NBR									Ν				
PROCESS CONNECTION	/ OVAL FLAM	NGE CONNECTION	I	VEN	TING								
1/4 - 18 NPT female	7/16-20 UNF	=		Incl. v	ent valve	es at fla	ange en	d		S			
ELECTRICAL CONNECTION	/ CABLE ENTRY	1											
M20 x 1.5 female thread (stand	dard)										S		
1/2"NPT female thread											Ν		
PG 11											Ρ		
APPROVALS													
None												S	
Intrinsically safe ATEX 🔂 II1	G Ex ia IIC T4	T6 Ga and IECEx 🎬	5									Ex	
OPTIONS													
Transparent cover, display fund	ctions as local ind	dicator											Ι
Degreasing (Silicone oil)													D
Oxygen cleaning (Fluorinated	oil) FKM gasket												Ox
Electronics housing material A	ISI 316 (Standard	d is AISI 304)											G9

Order code standard Model: DP-4000-S-C-S-S-S-V-S-S-S

100	ECCO	DIE	-
ALL	ESSU	RIE	
			~

- Mounting bracket (AISI 304)
- Oval Flanges (AISI 316L) to get 1/2" NPTf process connection.
- Bolts / nuts in AISI 316 (Standard is AISI 304)
- 3 way manifold (AISI 316L) Type: M3G
- 5 way manifold (AISI 316L) Type: M5G



Oval flanges (option)

3 or 5 way Manifold (option)









HAWK, Since 1988

Hawk Measurement Systems Pty Ltd (HAWK) was established in 1988. It's founding members saw the universal requirement of various industries requiring improved process control and efficiency in their operations.

We Can Help

HAWK understands the difficulties customers face when seeking accurate level measurement. Every application is different, involving a multitude of environmental factors. This is where HAWK excels. Our aim is to ensure that customers feel comfortable with our technology, and are provided with long term and reliable solutions. We believe that a combination of application and product expertise, as well as forward thinking and proactive support policies are the foundation of successful customer-supplier relationships.

Progressive Technical Support

HAWK believes that the future of the Level Measurement Industry revolves around the quality of pre and post sales support. Our aim is for all sales & support staff to be product experts, and more importantly application experts making our customers applications as efficient and consistent as possible.

Knowledge Sharing

HAWK believes that knowledge sharing is key to creating long term relationships. Empowering our customers and our worldwide distribution network, whilst being available at all times to lend a helping hand, is the perfect recipe for long term solutions and relationships. HAWK openly extends an invitation to share our 25 years of level measurement experience, and ensure that your day to day processes are efficient, understood, and always working.

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Additional product warranty and application guarantees upon request. Technical data subject to change without notice. Represented by:

