

W-Series DIFFERENTIAL

BETA products are manufactured in The Netherlands

Enclosures:

Cast Aluminum:

Oven baked powder coating
hammertone grey

Also available in SS 316

Wheaterproof IP 66 -
EN 60529 - Eex-d IICT6
(Nema 4X) -

Repeatability:
typical 0.2% of Full Scale

Range & Scale

Standard unit: **Bar**
Optional: PSI / Kg / Pa

Standard process connection:
1/4" NPT (F) or BSP (F)

Standard Diaphragm/O-ring:

D..L/ M: Buna N / Buna N
D..H: TCP/ Buna N

For wetted parts:

more possibilities available,
see full catalogue

**BETA SWITCHES ARE,
BUILD TO LAST!**

Do you want to know more:

Please contact your local dealer
and ask for the General Bulletin.
Or contact us directly!



www.beta-b.nl



Ranges for Differential switches

RANGE CODE	ADJUSTABLE DIFF. RANGE ¹⁾		TYPICAL DEADBAND ¹⁾		MAX. STATIC PRESSURE		MAX. VERRANGE PRESSURE		PROOF PRESSURE	
	mBar / Bar		mBar / Bar		Bar		Bar		Bar	
D 302 L	12 - 75 ²⁾	mBar	7	mBar	30	Bar	30 ³⁾	Bar	35	Bar
D 304 L	22 - 180	mBar	8	mBar						
D 306 L	25 - 450	mBar	11	mBar						
D 309 L	35 - 1250	mBar	15	mBar	10	Bar	140 ⁴⁾	Bar	140	Bar
D 402 M	0.3 - 1.0	Bar	0.15	Bar						
D 404 M	0.5 - 2.5	Bar	0.2	Bar						
D 406 M	1.0 - 6.0	Bar								
D 408 M	1.0 - 14.5	Bar	0.8	Bar	100	Bar	200 ⁴⁾	Bar	200	Bar
D 506 M	5 - 20	Bar								
D 508 M	10 - 50	Bar								
D 608 M	10 - 70	Bar	1.5	Bar	140	Bar	200	Bar	200	Bar
D 352 H	80 - 160	mBar	25	mBar						
D 354 H	100 - 500	mBar	35	mBar						
D 356 H	120 - 1450	mBar	50	mBar						
D 359 H	150 - 3450	mBar	75	mBar	200	Bar	200	Bar	200	Bar

NOTES:

- ¹⁾ Ranges and deadbands are given at 50% of Max. Static pressure.
All differential pressure sensors are sensitive to static pressure, both for setpoint and deadband.
- ²⁾ Range only with L1 micro switch.
- ³⁾ D...L can withstand a differential pressure P-low max. 1 bar above P-High.
- ⁴⁾ D...M, D...H can sustain full High and Low-side reversal.

IN THE FOLLOWING TABLE THE ESTIMATED INFLUENCE FOR INCREASING STATIC PRESSURE IS GIVEN.

SENSOR	SETPOINT	DEADBAND
D...L	- 0.7 mBar/Bar	= - 0.1 mBar/Bar
D...M	= + 3 mBar/Bar	+ 10 mBar/Bar
D...H	- 2 mBar/Bar	= - 0.4 mBar/Bar

Example: D...H-type Diff. setpoint: 1 bar (1000 mbar).

If static pressure increases 10 bar Diff.setpoint will be $(10 \times - 2 \text{ mbar}) = - 20 \text{ mbar less} = 980 \text{ mbar}$.

NOTE: For differential application outside above ranges consult your BETA Switch Representative.

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Making the modelcode: Follow steps 1 to 5

1 Selection of enclosure type.

Conduit	Material	Enclosure code
3/4" NPT F	Aluminium	W3
M20x1.5	SS 316	W8
3/4" NPT F	SS 316	W9

2 Selection of range code, see front page.

3 Selection of process connection.

Size	Material	Code
1/4" NPT F	SS316 *	S1N
1/4" BSP F	SS316 *	S1B
1/4" NPT F	Aluminium **	A1N
1/4" BSP F	Aluminium **	A1B
1/2" NPT M	SS316	S7N

* Only for D..H, D..D and D..M available

** D.. L: A1N or A1B For low side only.
High side: Only "L"-sensor connection

Proces connection according to NACE standard are available.
Consult your local BETA Switch Representative.

4 Selection of wetted parts *

Diaphragm	O-ring	Code
Buna N	Buna N	B1 **
Viton	Viton	V2 **
SS316	Buna N	S1
SS316	Viton	S2
SS316	Teflon	S4 **
SS316	EPDM	S6
SS316	Welded	S0 **

** Not possible for D..H. (P1 = Standard for D..H)

*** WETTED PARTS ARE NOT GUARANTEED,**
against corrosion or permeation since processes vary from plant to plant and concentration of harmful fluids, gasses or solids vary from time to time in a given process. Empirical experience by users should be the final guide and alternate materials based on this are generally available. The diaphragm / O-Ring combinations are for process temperatures of -5°C to +90°C, unless otherwise indicated. For process temperatures beyond these limits, please contact your BETA Switch Representative

Accessoires:

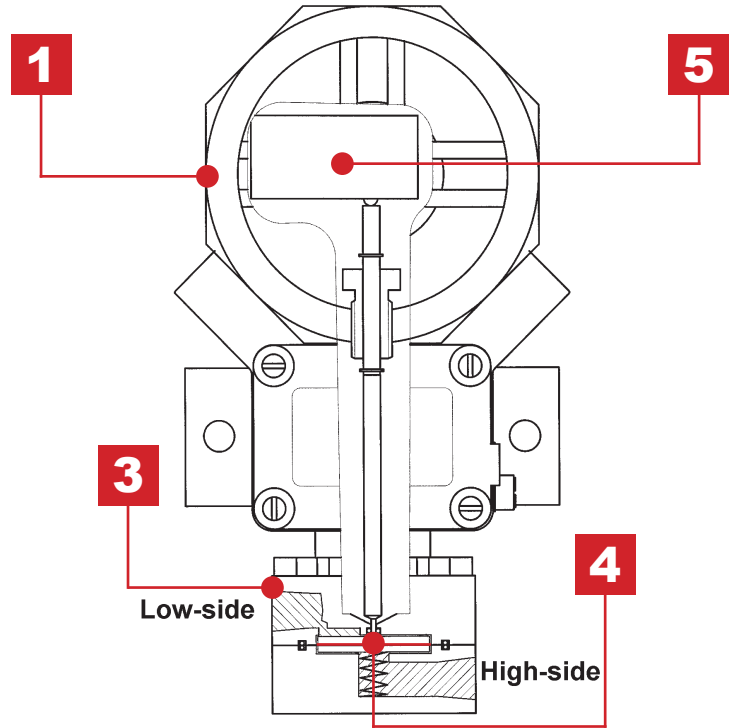
2" Pipe mount bracket set available.

Contents :

2 x Bracket +
2 x bolts M8 x 100 mm + nut

Disclaimer :

This pipe mount bracket is solely intended for use in combination with BETA Pressure & Temperature Switches. Foundation vibrations, as well as process vibrations, can disturb the proper functioning of the mounted instrument, the use of this bracket does not prevent or diminishes such occurrence.



5 Selection of microswitches.

Rating:		Use:	Switch Code
VAC.	VDC. ³⁾		
480/ 15A	28/ 0.5A	Standard	K1 ²⁾
480/ 10A	28/ 0.5A	Standaard for L-serie	L1 ²⁾
480/ 15A	125/ 0.5A	Normal DC-service	U1 ²⁾
125/ 1A	28/ 0.5A	For use in H ₂ S environment and/or for (EEx)i applications. ³⁾	G1 **
250/ 0.1A	30/ 0.1A		Y1 ¹⁾
250/ 0.1A	30/ 0.1A	Environmental proof (IP 67)	O1 ¹⁾
250/ 2A	30/ 2A		N1 ¹⁾

1) For D.P.D.T action, second code figure should be specified as "2"
For example: **Y1** = S.P.D.T./ **Y2** = D.P.D.T

2) VDE certified acc. to DIN EN 61 058-1:1992+A1:1993.

3) Indicated ratings are for resistive DC load only.

** DC Rating not U.L. listed, although experience and third party testing confirm the D.C Voltage ratings. Consult your local BETA switch Representative.

6 Selection of options.

Description	Option code
Cable gland	C
Vacuum Protection Plate	M
Stainless steel tag key ringed to enclosure (Tag has 2 lines - 16 characters per line)	S

* Not possible for D..H. (Standard for D..L)