



# Z-Series

Short Form Data Sheet

**VACUUM**

BETA products are manufactured in The Netherlands

**Enclosures:**

**Cast Aluminum:**

Oven baked powder coating  
hammer tone grey

**Also available in  
SS 316**

Wheaterproof IP 66 -  
EN 60529

(Nema 4X)

**Repeatability:**

typical 0.2% of Full Scale

**Standard unit:** Barg

**Optional:** PSI / Kg / Pa

**Standard process conetion:**  
1/4" NPT F or BSP F

**Standard Diaphragm/O-ring:**  
Buna N / 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](http://www.beta-b.nl)



**Ranges** for Vacuum switches

RANGE CODE	ADJUSTABLE RANGE <sup>1)</sup> (INCR. VAC. TO PRESS.)		MAX. DEADBAND (VAC. / PRESS.)		MAX. VACUUM		MAX. OVERRANGE PRESSURE		PROOF PRESSURE	
	Bar / mBar	mBar	mBar	mBar	Bar / mBar	Bar	Bar	Bar	Bar	
V 301 L	-10 to -3	mBar	1	mBar	-500	mBar	+10	Bar	+15	Bar
V 304 L	-60/0/+150	mBar	4/4/6.5	mBar	-500	mBar	+30	Bar	+35	Bar
V 404 M	-400/0/+400	mBar	16/16/25	mBar	-1	Bar	+125	Bar	+140	Bar
V 406 M	-980/0/+1000	mBar	30/30/40	mBar						
V 506 H	-1/0/+6	Bar	80/80/25	mBar						

<sup>1)</sup> For setpoint around zero bar gauge, consult factory.

**Disclaimer:** We reserve the right to make changes or modify the contents of this document without prior notice. BETA B.V. does not accept any liability or claim whatsoever for potential errors, incorrect interpretation or possible lack of information in this document. It is clearly and only intended as course and general information of our products.

More Short Form Data Sheets on Vacuum, Differential and Temperature Switches are available.

Doc. no.: SP 422/1307/5K-(FC)

**Making the modelcode: Follow steps 1 to 5**

**1 Selection of enclosure type.**

Conduit	Material	Enclosure code
Pg13.5	Aluminium	<b>Z1</b>
M20x1.5	Aluminium	<b>Z2</b>
3/4" NPT F	Aluminium	<b>Z3</b>
1/2" NPT F	Aluminium	<b>Z4</b>
M20x1.5	SS 316	<b>Z8</b>
3/4" NPT F	SS 316	<b>Z9</b>

**2 Selection of range code, see front page**

**3 Selection of process connection.**

Size	Material	Code
1/4"NPT F	Aluminium *	<b>A1N</b>
1/2"NPT F	Aluminium *	<b>A2N</b>
1/4"NPT F	SS316	<b>S1N</b>
1/2"NPT F	SS316	<b>S2N</b>
1/2"NPT M	SS316	<b>S7N</b>

Process conn. size max. 1/2"  
Piston & Spring (both wetted) standard in SS 316.

\* Aluminium process connection, only for P.L Sensor.

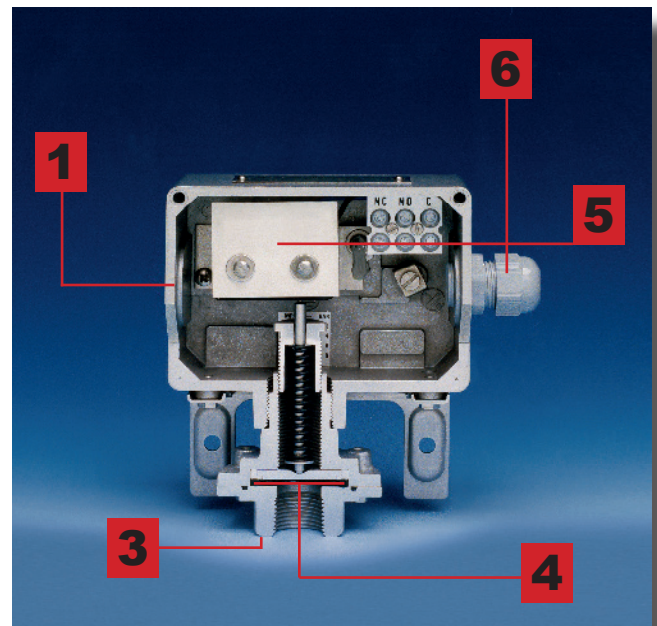
Above standard process connections are also available in: "BSP"  
For example: 1/2" BSP F (3316) = **S2B**

Process connections are also available in other materials like,  
Monel, PVC, Hastolloy, Titanium etc.

**4 Selection of wetted parts \***

Diaphragm	O-ring	Code
Buna N	Buna N	<b>B1</b>
Viton	Viton	<b>V2</b>
SS316	Buna N	<b>S1</b>
SS316	Viton	<b>S2</b>
SS316	Neoprene	<b>S3</b>
SS316	EPDM	<b>S6</b>
Tantulum	Buna N	<b>T1</b>

\* **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



**5 Selection of microswitches**

Rating		Use:	Switch Code:
VAC.	VDC.		
250/ 5A	250/ 0.25A	ATEX approved. For z-series only	<b>R1</b>
250/ 5A	250/ 0.25A		<b>R2</b>

1) For D.P.D.T action, second code figure should be specified as "2"

For example: **R1** = S.P.D.T./ **R2** = D.P.D.T

**6 Selection of options**

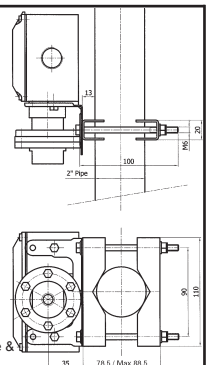
Description	Option code
Cable gland	<b>C</b>
Stainless steel tag key ringed to enclosure (Tag has 2 lines - 16 characters per line)	<b>S</b>
Epoxy coating of switch. (External) Only in combination SS 316 process connection	<b>Y</b>

**Accessoires:**

2" Pipe mount bracket set available.

**Contents :**

2 x bolts M6 x 100 mm + washer + nut  
Size +/- 1,5 mm / Material SS 304



**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.

For extended selection and/ or specified technical information, please ask for the "BETA User Friendly" Catalogue.