

## Pressure switch series B4 and B7

General purpose or Ex-proof according UL or ATEX (Ex d or Ex ia)  
 Accuracy:  $\pm 1$  %

### Features

- Ambient temperature up to 60 °C for Ex applications
- $\text{Ex}$  II 2 GD or  $\text{Ex}$  II 1 GD
- Class 1 Division 1 Gr. B, C and D according UL
- Protection IP66 or NEMA 3, 4, 4X, 7, 9 and 13 (UL)
- Wetted parts available in several materials
- High proof pressure

### Ranges

-37,5/+37,5 mbar up to 210 bar  
 -15/+15 in. H<sub>2</sub>O up to 3000 psi

### Applications

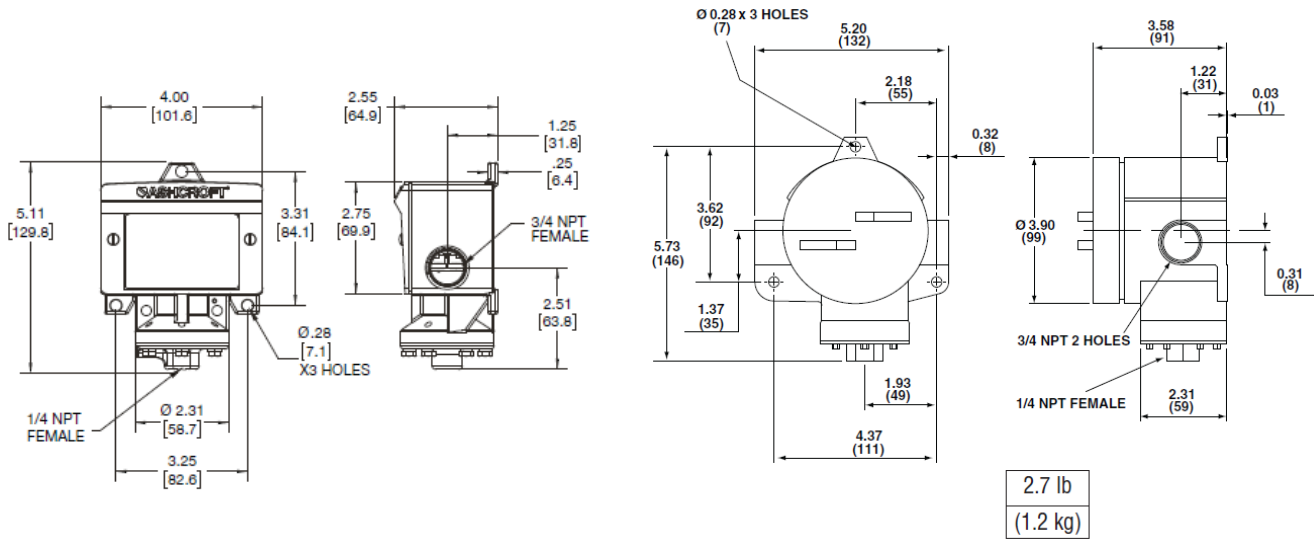
Chemical and petrochemical industry  
 Machine and apparatus construction  
 Food and beverage industry  
 Pulp and paper industry



Technical specification	B4 series	B7 series	
Construction	Weatherproof	Ex-proof according UL CSA on request	Flame proof according EN 60079-0, -1, -31 Intrinsically safe acc. IEC 60079-0 and EN 60079 -11, -26
Switch functions	One setpoint, single pole double throw (SPDT) or 2 times SPDT (2SPDT)		
Adjustable range	From 15 % to 100 %, below 15 % consult factory		
Deadband	From 0,5 % to 15 % F.S., depending on material, range and microswitch		
Measuring principle	Diaphragm-piston-cylinder-system		
Range in mbar	25 75 150 250 375 -37,5/37,5 -75/75	70 140 210	-1/0 -1/1 -1/2 -1/4
Range in bar	1 2 4 7 14 28 42	28 to 42 bar	70 to 210 bar
Limits (pressure ranges)	mbar vacuum 1 to 4 bar 7 to 14 bar	28 to 42 bar	70 to 210 bar
Proof pressure in bar	1,4 17 35 69	165	827
Burst pressure in bar	2,4 28 103 207	207	1240
Pressure type	Gauge, vacuum and compound		
Process connection	$\frac{1}{4}$ NPT female, $\frac{1}{2}$ NPT male/ $\frac{1}{4}$ NPT female (standard for $\geq 70$ bar) $\frac{1}{2}$ NPT female, G $\frac{1}{2}$ B male, M20x1,5, others on request (metric connections with adapter)		
Connection location	Lower		
Material	Stainless steel 316 (1.4401), optional Monel		
Pressure connection	For mbar ranges steel epoxy coated standard, stainless steel on request		
Diaphragm	Buna N, Viton (max. 70 bar), Teflon, stainless steel 316 (1.4401) or Monel (stainless steel and Monel only from 1 bar to 70 bar)		
Housing	Aluminum, epoxy coated black		
Accuracy	1,0 % F.S.		
<b>Electrical specification</b>			
Microswitch ratings	From 6 A 30 VDC up to 22 A 250 VAC (see microswitch table)		
Flameproof and dust ignition protection by enclosure		Class 1 Div. 1 Gr. B, C and D Class 2 Div. 1 Gr. E, F and G	$\text{Ex}$ II 2 GD Ex d IIC T6 Gb Ex t IIIC T85°C Db IP6X SIRA 02 ATEX 1391X
Intrinsically safe and dust ignition protection by enclosure			$\text{Ex}$ II 1 GD Ex ia IIC T4 Ga Ex ia IIIC T135°C Da SIRA 04 ATEX 2081
Electrical connection	$\frac{3}{4}$ NPT female, optional cable glands, $\frac{1}{2}$ NPT with reducer bushing, M20x1,5, others on request		
<b>General specification</b>			
Permissible			
Ambient temperature	-25 ... 60 °C	-25 ... 65 °C	-20 ... 60 °C
Medium temperature	Buna N and Teflon -18 ... 65 °C, Viton -7 ... 150 °C, stainless steel and Monel -18 ... 150 °C (Medium temperature of ATEX approved switches is restricted due to temperature class.)		
Storage temperature	-40 ... 60 °C		
Effect	Max. 0,4 % / 10 K ref. 20 °C		
Protection according UL	NEMA 4, 4X and 13		NEMA 7 and 9
Protection according EN 60 529/IEC 529	IP66		IP66
CE-mark	Low voltage regulations EN 61 010-1, EN 60 947-1		
Mounting	Standard stem, wall (BP) or 2" pipe mounting (TM)		
Weight mbar/bar in kg	1,2/0,7		1,6/1,2
Accessories, options	Diaphragm seals, valves, adapters, NACE		

All specifications are subject to change without notice.

General dimensions in inch (mm)



Order information

Switch element	Material actuator seal	Range	Engineering unit	Protection	Process connection	Electrical connection	Options
<b>SPDT</b> <b>(20)</b> Narrow deadband <sup>1)</sup> (15 A 250/480 VAC, 0.4A 120VDC)	<b>(B)</b> Buna N <sup>1)</sup>	<b>-15/ 15</b> <b>-30/ 30</b>	<b>INH2O</b>	<b>(IP)</b> Standard IP66	<b>(25)</b> ¼ NPT female	<b>(=)</b> Standard	<b>(NH)</b> Tagging wired
<b>(21)</b> Ammonia service (5A 250 VAC, 6 A 30 VDC)	<b>(V)</b> Viton <sup>2)</sup>	<b>-30/ 0</b>	<b>INHG/PSI</b>	<b>(UL)</b> UL approval B4 NEMA 4 B7 NEMA 7 & 9	<b>(06)</b> ¼ NPT female/ ½ NPT male <sup>1)</sup>	<b>(JL)</b> ¼ to ½ NPT female reducing bushing	<b>(FS)</b> Factory adjusted set-point
<b>(22)</b> Hermetically sealed (5 A 250 VAC)	<b>(T)</b> Teflon <sup>1)</sup>	<b>-30/ 15</b> <b>-30/ 30</b> <b>-30/ 60</b>					
<b>(23)</b> Heavy duty AC (22 A 250 VAC)	<b>(S)</b> 316 (1.4401) <sup>3)</sup>						
<b>(24)</b> General purpose <sup>1)</sup> (15 A 250 VAC, 6 A 30 VDC)	<b>(P)</b> Monel <sup>3)</sup>	<b>10</b> <b>30</b> <b>60</b> <b>100</b> <b>150</b>	<b>INH2O</b>	<b>(CEN3)</b> ATEX Ex d with cable gland Ex d PG13,5 (only for B7)	<b>(07)</b> ½ NPT female <b>(15)</b> G ½ B male <sup>2)</sup>	<b>(JM)</b> ¼ NPT to M20x1,5 female reducing bushing	<b>(6B)</b> Oxygen cleaned (not for Buna N diaphragm; in. H <sub>2</sub> O ranges only with option TA)
<b>(26)</b> Sealed environment proof <sup>1)</sup> (15 A 250 VAC, 0.4A 120VDC)						<b>(K3)</b> Terminal block (standard for B7 with 2xSPDT, not for B4)	<b>(TM)</b> 2" pipe mounting bracket
<b>(27)</b> High temp. (max. 150 °C) (15 A 250 VAC)		<b>15</b> <b>30</b> <b>60</b> <b>100</b> <b>200</b> <b>400</b> <b>600</b> <b>1000</b> <b>2000</b> <b>3000</b>	<b>PSI</b>	<b>(CEN4)</b> ATEX Ex d and Ex t ¼ NPT thread female (only for B7)	<b>(16)</b> M20x1,5 male <sup>2)</sup>	<b>Only for protection IP</b>	<b>(TA)</b> 316 (1.4401) pressure connection for in. H <sub>2</sub> O ranges
<b>(31)</b> Low level (gold) contacts (1 A 125 VAC)							
<b>(32)</b> Hermetically sealed general purpose (11 A 250 VAC, 5 A 28 VDC)				<b>(CEN6)</b> ATEX Ex ia ¼ NPT thread female (only for B7)	<sup>1)</sup> standard for ranges ≥ 70 bar	<b>(KV2)</b> Plastic cable gland IP65, PG11	<b>(BP)</b> Wall mounting bracket for in. H <sub>2</sub> O ranges
<b>(42)</b> Hermetically sealed, gold contacts (1 A 125 VAC)				<b>(CEN7)</b> ATEX Ex ia with cable gland Ex d PG13,5 (only for B7)		<b>(KV3)</b> Plastic cable gland IP65, PG13,5	
<b>(50)</b> Variable deadband (15 A 250 VAC)						<b>(KV4)</b> Plastic cable gland IP65, PG16	<b>(MD)</b> Metric ranges
<b>2xSPDT</b> <b>(61)</b> see code (20) <b>(62)</b> see code (26) <b>(63)</b> see code (27) <b>(64)</b> see code (24) <b>(65)</b> see code (21) <b>(67)</b> see code (22) (not B4 series) <b>(68)</b> see code (32) (not B4 series) <b>(70)</b> see code (31) <b>(71)</b> see code (42) (not B4 series)	<sup>1)</sup> max. medium temperature -18 ... 65 °C <sup>2)</sup> max. medium temperature -7 ... 150 °C <sup>3)</sup> max. medium temperature -18 ... 150 °C only ranges from 15 to 1000 psi	Note the range can also be specified in mbar or bar				<b>(KV52)</b> Plastic cable gland PG13,5	
<sup>1)</sup> VDC rating not UL listed					<sup>2)</sup> with Adapter		

Order example

Type	Switch element	Material actuator seal	Range	Engineering unit	Protection	Process connection	Electrical connection	Option
<b>B7</b>	<b>24</b>	<b>B</b>	<b>100</b>	<b>PSI</b>	<b>UL</b>	<b>25</b>	<b>JL</b>	<b>NH</b>

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