

## DS 6

### Electronic OEM Pressure Switch

#### Applications:

- ▶ mechanical engineering / hydraulics
- ▶ measuring, control and process technology

#### Characteristics:

- ▶ nominal pressure ranges from 0 ... 2 bar up to 0 ... 400 bar
- ▶ 1 or 2 contacts
- ▶ configurable via PC or programming device P6
- ▶ optional:  
oil- and grease free version



#### Technical Data

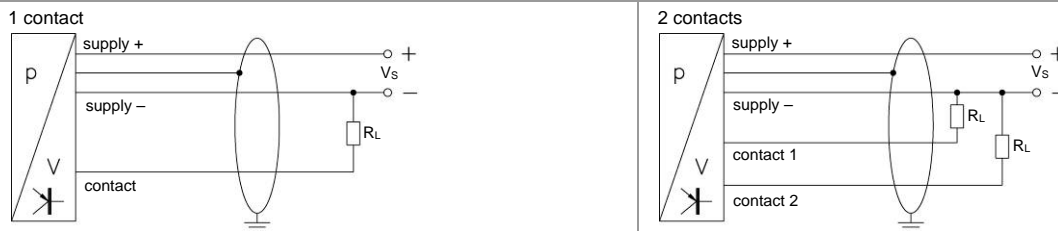


Input pressure range									
Nominal pressure gauge	[bar]	2	5	10	20	50	100	200	400
Nominal pressure abs.	[bar]	2	5	10	20	50	100	200	400
Overpressure	[bar]	7	12	25	50	120	250	400	600
Supply									
Supply voltage		$V_S = 12 \dots 30 V_{DC}$							
Current consumption		max. 14 mA (without contacts)							
Contacts									
Number		standard: 1				option: 2			
Type		PNP							
Switching performance		max. 300 mA, short-circuit proof							
Accuracy of contacts		IEC 60770: $\leq \pm 1 \% FSO$							
Repeatability		$\leq \pm 0.2 \% FSO$							
Minimum hysteresis of contacts		$\leq \pm 0.5 \% FSO$							
Status indication		SP 1: green				SP 2: yellow			
Switching function <sup>1</sup>		standard: n/o				option: n/c			
Switching mode <sup>1</sup>		standard: hysteresis mode				option: window mode			
Switch on point <sup>1</sup>		standard: factory setting 80 % FSO others: specify on order; adjustable range 5 ... 100 % FSO							
Switch off point <sup>1</sup>		standard: factory setting 75 % FSO others: specify on order; adjustable range 5 ... 100 % FSO							
Switch on / switch off delay <sup>1</sup>		standard: off others: specify on order, adjustable range from 10 msec up to 90 sec (step 10 msec)							
Switching frequency		200 Hz (without switching delay)							
Switching cycles		$> 100 \times 10^6$							
<sup>1</sup> Parameters can be programmed by customer either with the programming kit CIS-G or with the programming device P6 (available as accessories).									
Thermal effects (offset and span) / Permissible temperatures									
Thermal error		$\leq \pm 0.3 \% FSO / 10 K$				in compensated range 0 ... 85 °C			
Permissible temperatures		medium / electronics / environment: -25 ... 85 °C				storage: -40 ... 85 °C			

<b>Electrical protection</b>		
Short-circuit protection	permanent	
Reverse polarity protection	no damage, but also no function	
Electromagnetic compatibility	emission and immunity according to EN 61326	
<b>Mechanical stability</b>		
Vibration	10 g RMS (20 ... 2000 Hz)	according to DIN EN 60068-2-6
Shock	100 g / 11 msec	according to DIN EN 60068-2-27
<b>Materials</b>		
Pressure port	stainless steel 1.4301 (304)	
Housing	stainless steel 1.4305 (303)	
Seals (media wetted)	standard: FKM	option: EPDM
Diaphragm	ceramic Al <sub>2</sub> O <sub>3</sub> 96 %	
Media wetted parts	pressure port, seals, diaphragm	
<b>Miscellaneous</b>		
Weight	approx. 90 g	
Installation position	any	
Operational life	100 million load cycles	
Ingress protection	IP 67	
CE-conformity	EMC Directive: 2014/30/EU	Pressure Equipment Directive: 2014/68/EU (module A) <sup>2</sup>

<sup>2</sup> This directive is only valid for devices with maximum permissible overpressure > 200 bar

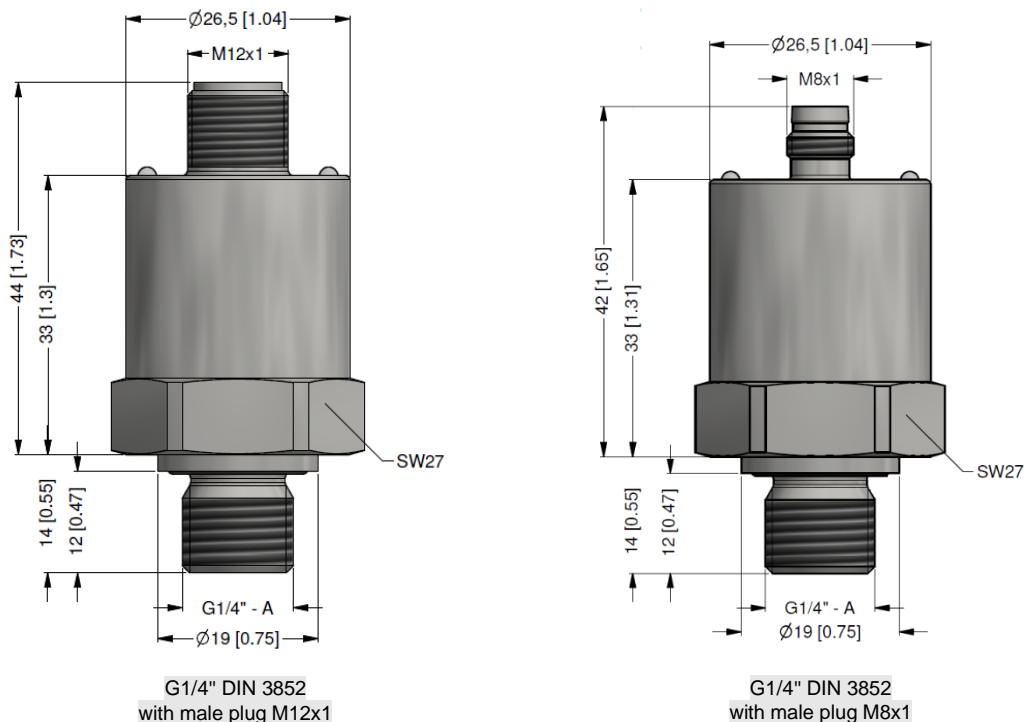
### Wiring diagrams



### Pin configuration

Electrical connection	M12x1 (4-pin), metal		M8x1 (4-pin), metal	
Supply +	1		1	
Supply -	3		3	
Contact 1	4		4	
Contact 2	2		2	
Shield	plug housing		plug housing	

### Dimensions (mm / in)



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## Ordering code DS 6

DS 6		□	□	□	-	□	□	□	-	□	□	-	□	□	□	-	□	□	□	-	□	□	□	-	□	□	□		
<b>Pressure</b>																													
	gauge	6	8	5																									
	absolute	6	8	6																									
<b>Input</b>																													
	[bar]																												
	2	2	0	0	1																								
	5	5	0	0	1																								
	10	1	0	0	2																								
	20	2	0	0	2																								
	50	5	0	0	2																								
	100	1	0	0	3																								
	200	2	0	0	3																								
	400	4	0	0	3																								
	customer	9	9	9	9																								
<b>Number of contacts</b>																													
	1 contact																												
	2 contacts																												
<b>Analogue output</b>																													
	without analogue output																												
<b>Electrical connection</b>																													
	M12x1 (4-pin), metal																												
	M8x1 (4-pin), metal																												
	customer																												
<b>Mechanical connection</b>																													
	G1/4" DIN 3852																												
	customer																												
<b>Seal</b>																													
	FKM																												
	EPDM																												
	customer																												
<b>Setting code</b>																													
	BD SENSORS standard <sup>1</sup>																												
	setting according to customer <sup>1</sup>																												
<b>Special version</b>																													
	standard																												
	oil and grease free																												
	customer																												

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