

## DS 5

### Electronic OEM Pressure Switch Heavy Duty

#### Applications:

- ▶ mobile hydraulics
- ▶ presses
- ▶ oxygen application

#### Characteristics:

- ▶ stainless steel sensor, welded
- ▶ nominal pressure ranges from 0 ... 16 bar up to 0 ... 600 bar
- ▶ configurable via PC or programming device P6
- ▶ optionally: oil and grease free version



#### Technical Data



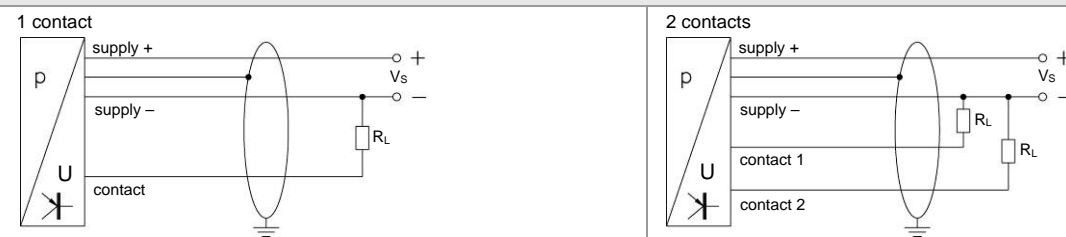
Input pressure range										
Nominal pressure gauge	[bar]	16	25	40	60	100	160	250	400	600
Overpressure (static)	[bar]	50	50	80	120	200	320	500	800	1200
Burst pressure $\geq$	[bar]	125	125	200	300	500	800	1250	2000	2000

Supply	
Supply voltage	$V_S = 12 \dots 30 V_{DC}$
Current consumption	max. 14 mA (without contacts)
Contacts	
Number	standard: 1 <span style="float: right;">option: 2</span>
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 <span style="float: right;">SP 2: yellow</span>
Switching function <sup>1</sup>	standard: n/o <span style="float: right;">option: n/c</span>
Switching mode <sup>1</sup>	standard: hysteresis mode <span style="float: right;">option: window mode</span>
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	$\leq \pm 0.2 \% FSO / 10 K$ <span style="float: right;">in compensated range -20 ... 80 °C</span>
Permissible temperatures	medium: -40 ... 125 °C <span style="float: right;">electronics / environment / storage: -40 ... 85 °C</span>

Electrical protection		
Short-circuit protection	permanent	
Reverse polarity protection	no damage, but also no function	
Electromagnetic compatibility	emission and immunity according to EN 61326	
Mechanical stability		
Vibration	20 g RMS / 10 ... 2000 Hz	according to DIN EN 60068-2-6
Shock	500 g / 1 msec half sine	according to DIN EN 60068-2-27
Materials		
Pressure port	stainless steel 1.4404 (316L)	
Housing	stainless steel 1.4305 (303)	
Seal of pressure port	FKM	others on request
Seal of sensor	none (welded)	
Sensor	stainless steel 1.4548 (17-4PH)	
Media wetted parts	pressure port, seal, sensor	
Miscellaneous		
Oxygen application	option for mechanical connections 1/4" NPT, R 1/4" and 7/16"-20 UNF (on request)	
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

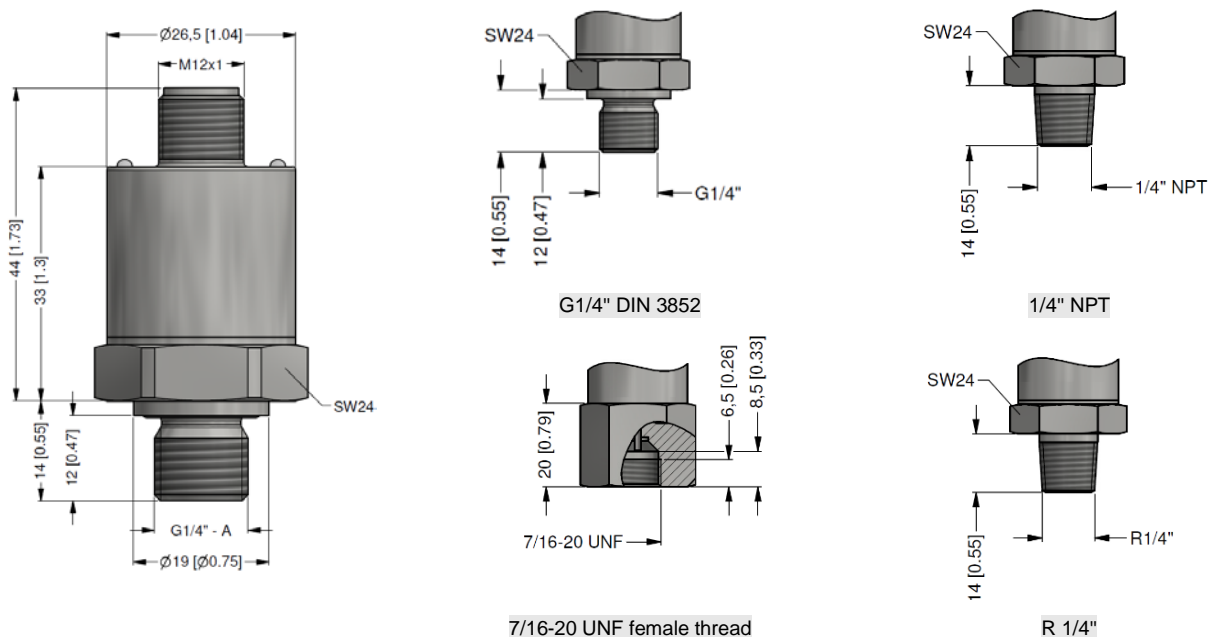
### Wiring diagrams



### Pin configuration

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

### Dimensions / Mechanical connections (mm / in)



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## Ordering code DS 5

**DS 5**


Pressure										
gauge	6	8	M							
Input										
[bar]										
16				1	6	0	2			
25				2	5	0	2			
40				4	0	0	2			
60				6	0	0	2			
100				1	0	0	3			
160				1	6	0	3			
250				2	5	0	3			
400				4	0	0	3			
600				6	0	0	3			
customer				9	9	9	9	consult		
Number of contacts										
1 contact								1		
2 contacts								2		
Electrical connection										
M12x1 (4-pin), metal							M	1	3	
customer							9	9	9	consult
Mechanical connection / Seal										
G1/4" DIN 3852 /					3	0	0	P		
on pressure port: FKM										
customer					9	9	9	9	consult	
Setting code										
BD SENSORS standard <sup>1</sup>					0	0	0			
setting according to customer <sup>1</sup>					9	9	9	consult		
Special version										
standard							0	0	0	
customer							9	9	9	consult

<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).