

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



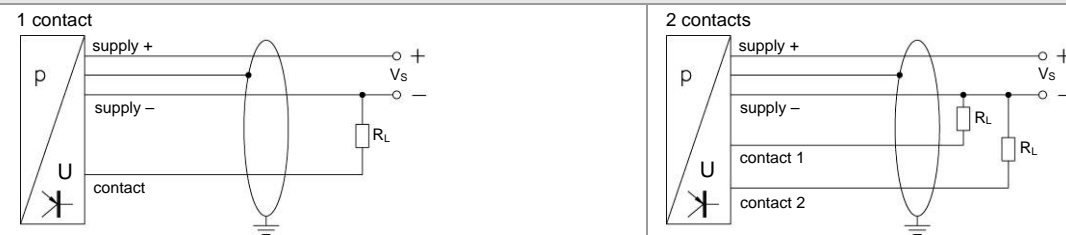
Input pressure range										
Nominal pressure gauge	[bar]	16	25	40	60	100	160	250	400	600
Overpressure (static)	[bar]	50	50	80	120	200	320	500	800	1200
Burst pressure ≥	[bar]	125	125	200	300	500	800	1250	2000	2000

Supply	
Supply voltage	$V_S = 12 \dots 30 V_{DC}$
Current consumption	max. 14 mA (without contacts)
Contacts	
Number	standard: 1 option: 2
Type	PNP
Switching performance	max. 300 mA, short-circuit proof
Accuracy of contacts	IEC 61298-2: $\leq \pm 1\%$ 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 ¹	standard: n/o option: n/c
Switching mode ¹	standard: hysteresis mode option: window mode
Switch on point ¹	standard: factory setting 80 % FSO others: specify on order; adjustable range 5 ... 100 % FSO
Switch off point ¹	standard: factory setting 75 % FSO others: specify on order; adjustable range 5 ... 100 % FSO
Switch on / switch off delay ¹	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	$> 100 \times 10^6$
¹ 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 in compensated range -20 ... 80 °C
Permissible temperatures	medium: -40 ... 125 °C electronics / environment / storage: -40 ... 85 °C

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) ²

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

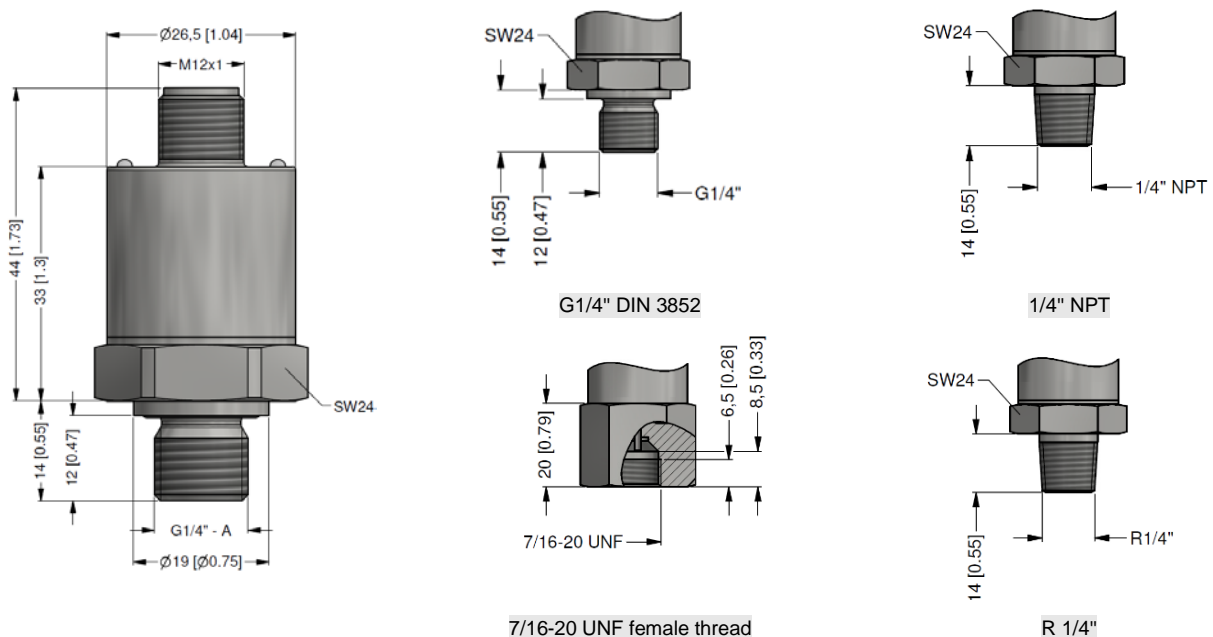
Wiring diagrams



Pin configuration

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

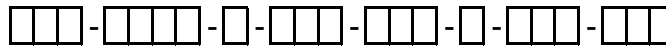
Dimensions / Mechanical connections (mm / in)



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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 / on pressure port: FKM							3	0	0	P				
customer							9	9	9	9				consult
Setting code														
BD SENSORS standard ¹							0	0	0					
setting according to customer ¹							9	9	9				consult	
Special version														
standard									0	0	0			
customer									9	9	9	consult		

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