BD|SENSORS
pressure measurement

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 ... 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: ≤ ± 1 % FSO	
Repeatability	≤ ± 0.2 % FSO	
Minimum hysteresis of contacts	≤ ± 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 x 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	≤ ± 0.2 % FSO / 10 K	in compensated range -20 ... 80 °C
Permissible temperatures	medium: -40 ... 125 °C	electronics / environment / storage: -40 ... 85 °C

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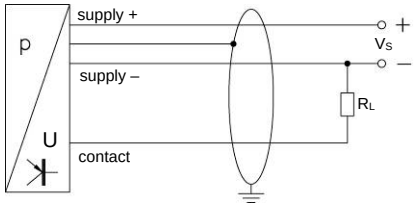
Electrical protection		
Short-circuit protection	permanent	
Reverse polarity protection	no damage, but also no function	
Electromagnetic compatibility	emission and immunity according to EN 61326	
Mechanical stability		
Vibration	20 g RMS / 10 ... 2000 Hz	according to DIN EN 60068-2-6
Shock	500 g / 1 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 and R 1/4"	
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]

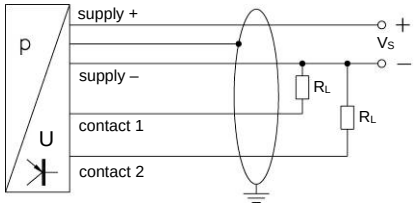
[2] *This directive is only valid for devices with maximum permissible overpressure > 200 bar*

Wiring diagrams

1 contact

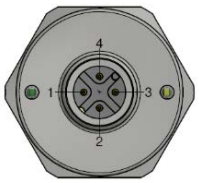


2 contacts

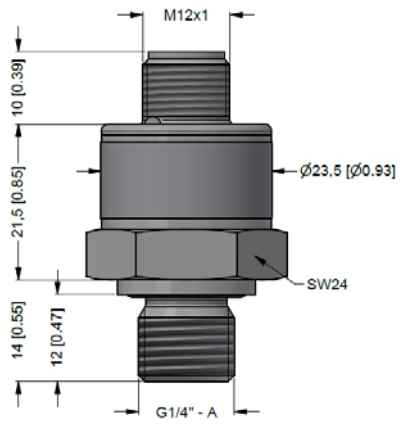


Pin configuration

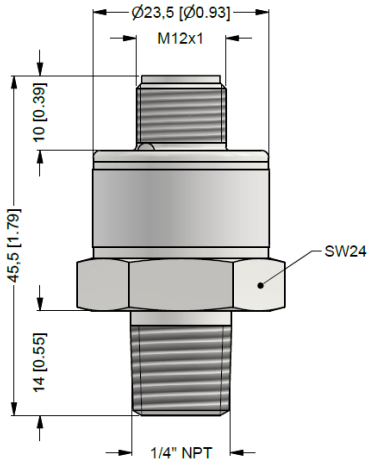
Electrical connection	M12x1 (4-pin), metal
Supply +	1
Supply –	3
Contact 1	4
Contact 2	2
Shield	plug housing



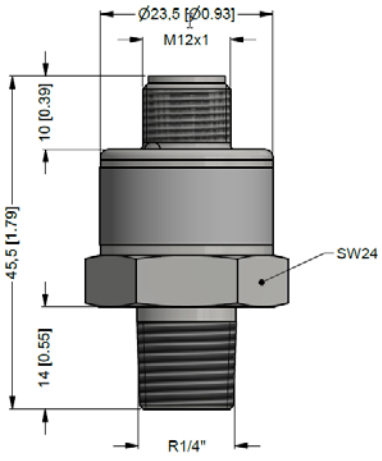
Dimensions / Mechanical connections (mm / in)



G1/4" DIN 3852



1/4" NPT



R 1/4"

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Ordering code DS 5

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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						
1/4" NPT / without												N	4	0	2						
R1/4" / without												R	4	0	2						
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
oxygen application [2]																			0	0	7
oil and grease free																			0	0	8
customer																			9	9	consult

[1] Parameters can be programmed by customer either with the programming kit CIS-G or with the programming device P6 (available as accessories).
[2] not possible with G1/4" DIN 3852

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06.10.2026

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