Se produktet på www.insatech.com
See product on www.insatechmarine.com

DCT 532

Industrial Pressure Transmitter with i²C interface

Stainless Steel Sensor

Accuracy according to IEC 60770:
≤ ± 0.25 % FSO

Nominal pressure

from 0 ... 100 mbar up to 0 ... 400 bar

Digital output signal

- i²C
- bus frequency max. 400 kHz
- configuration of data format
- interrupt signal

Special characteristic

- ► perfect thermal behaviour
- ► excellent long term stability

Optional versions

- ► pressure port
  G 1/2" flush up to 40 bar
- ► welded sensor
- ► customer specific versions

Contrary to the industrial pressure transmitter with analogue signal, the DCT 532 has a digital i²C-interface. i²C has a master-slave topology, whereby you can use up to 127 devices at one master. In addition to the typical settings, as slave address, data format, etc., it is possible to do special parametrisation for pressure unit and more.

Due to the usage of high quality materials and components, the DCT 532 is suitable for almost every industrial application, if medium is compatible with stainless steel 316L.

The modular concept of the pressure transmitter allows customized electrical or mechanical connections, so it is easy to adapt the pressure transmitter to different conditions on-site.

Preferred areas of use are

- Plant and machine engineering
- Energy industry

BD SENSORS GmbH
BD-Sensors-Straße 1
D - 95199 Thierstein

Tel.: +49 (0) 92 35 / 98 11- 0
Fax: +49 (0) 92 35 / 98 11- 11

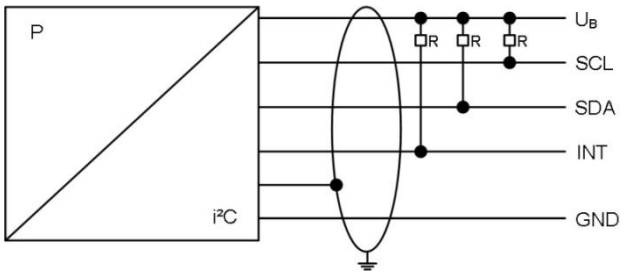
www.bdsensors.de
info@bdsensors.de

Input pressure range											
Nominal pressure gauge	[bar]	-1…0	0.10	0.16	0.25	0.40	0.60	1	1.6	2.5	4	6
Nominal pressure abs.	[bar]	-	-	-	-	0.40	0.60	1	1.6	2.5	4	6
Overpressure	[bar]	5	0,5	1	1	2	5	5	10	10	20	40
Burst pressure ≥	[bar]	7.5	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50

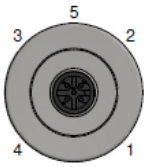
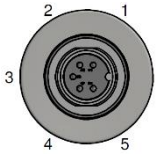
Nominal pressure gauge / abs.	[bar]	10	16	25	40	60	100	160	250	400
Overpressure	[bar]	40	80	80	105	210	600	600	1000	1000
Burst pressure ≥	[bar]	50	120	120	210	420	1000	1000	1250	1250
Vacuum resistance		p_N ≥ 1 bar: unlimited vacuum resistance p_N < 1 bar: on request								

Output signal / Supply	
i²C	V_S = 3.5 ... 5.5 V_{DC}
Performance	
Accuracy [1]	≤ ± 0.25 % FSO
Max. I/O current	10 mA
Long term stability	≤ ± 0.1 % FSO / year at reference conditions
Response time	1.5 msec + transmission time (depending on bus frequency)
Measuring rate	500 Hz
[1] accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)	
Thermal effects (offset and span)	
Tolerance band	≤ ± 0.75 % FSO
in compensated range	-20 ... 85 °C
Permissible temperatures	
Medium	-25 ... 125 °C
Electronics / environment	-25 ... 85 °C
Storage	-40 ... 85 °C
Electrical protection	
Short-circuit protection	permanent
Reverse polarity protection	by exchanged supply connections no damage, but also no function by exchanged communication with signal lines it can come according to constellation to damages.
Electromagnetic compatibility	emission and immunity according to EN 61326
Mechanical stability	
Vibration	10 g RMS (25 ... 2000 Hz) according to DIN EN 60068-2-6
Shock	500 g / 1 msec according to DIN EN 60068-2-27
Materials	
Pressure port / Housing	stainless steel 1.4404 (316 L)
Seals (media wetted)	standard: FKM options: EPDM welded version [2] (for p_N ≤ 40 bar) others on request
Diaphragm	stainless steel 1.4435 (316 L)
Media wetted parts	pressure port, seal, diaphragm
[2] welded version only with pressure ports according to EN 837, p_N ≤ 40 bar	
Miscellaneous	
Current consumption	< 15 mA
Weight	approx. 140 g
Ingress protection	IP 67
Installation position	any [3]
Operational life	100 million load cycles
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) [4]
[3] Pressure transmitters are calibrated in a vertical position with the pressure connection down. If this position is changed on installation there can be slight deviations in the zero point for pressure ranges p_N ≤ 1 bar. *[4] This directive is only valid for devices with maximum permissible overpressure > 200 bar*	

Wiring diagrams

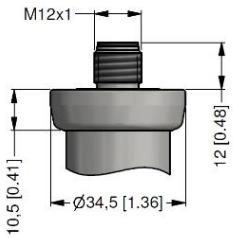


Pin configuration

Electrical connection	M12x1 / metal (5-pin)	Binder 723 (5-pin)
		
Supply +	1	1
Supply –	3	3
SDA	2	2
SCL	4	4
INT	5	5
Shield	housing	housing

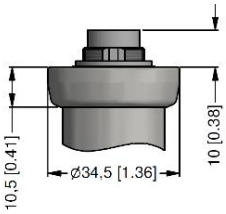
Electrical connections (dimensions mm / in)

standard



M12x1 (5-pin)

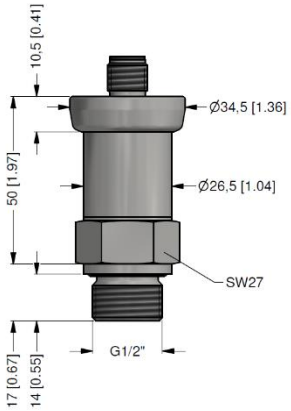
optionally



Binder Serie 723 (5-pin)

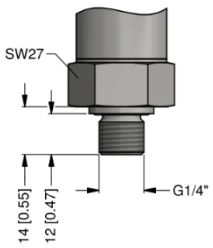
Dimensions (mm / in)

standard

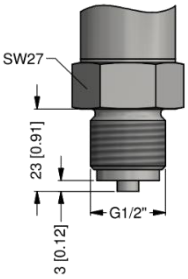


G1/2" DIN 3852
withM12x1

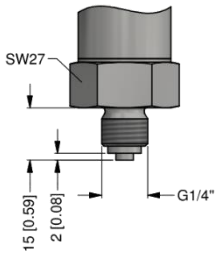
optionally



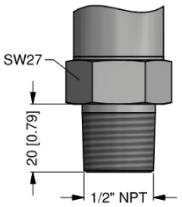
G1/4" DIN 3852



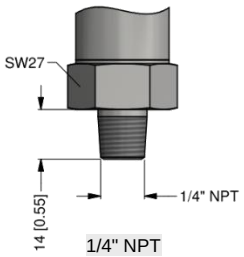
G1/2" EN 837



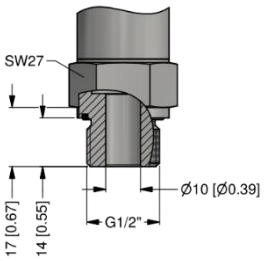
G1/4" EN 837



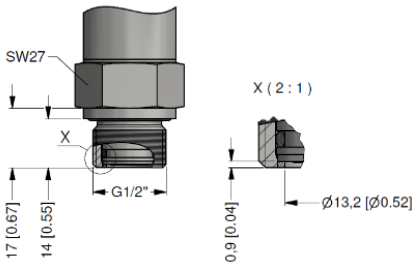
1/2" NPT



1/4" NPT



G1/2" DIN 3852 open port,
p_N ≤ 40 bar



G1/2" DIN 3852
with flush sensor, p_N ≤ 40 bar

⇨ **metric threads and other versions on request**

Configuration i²C-interface

Stand configuration	0	5	0	-	0	-	0	-	0	-	0	-	0	0	0	0	1
Slave address																	
address	0	0	1														
		…															
	1	2	7														
Type of result register																	
32bit IEEE float					0												
16bit Integer					1												
Byte order of values																	
Low byte first							0										
High byte first							1										
Mode of result register																	
Value									0								
Percent of nominal									1								
Restore of address pointer																	
No restore											0						
To last set address on next start											1						
Digital meaning																	
Count of result													0	0	0	0	1
															…		
													1	0	0	0	0

Configuration code (has to be defined with the order)				-		-		-		-		-					

© 2022 BD|SENSORS GmbH – The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.

Tel.: +49 (0) 92 35 / 98 11- 0
Fax: +49 (0) 92 35 / 98 11- 11
www.bdsensors.de
info@bdsensors.de
BD|SENSORS pressure measurement

Ordering code DCT 532

DCT 532 □□□-□□□□-□-□-□□□-□□□-□-□□□

Pressure																									
gauge		D	C	0																					
absolute	[1]	D	C	1																					
Input	**[bar]**																								
0.10	[1]				1	0	0	0																	
0.16	[1]				1	6	0	0																	
0.25	[1]				2	5	0	0																	
0.40					4	0	0	0																	
0.60					6	0	0	0																	
1.0					1	0	0	1																	
1.6					1	6	0	1																	
2.5					2	5	0	1																	
4.0					4	0	0	1																	
6.0					6	0	0	1																	
10					1	0	0	2																	
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																	
-1 … 0					X	1	0	2																	
customer					9	9	9	9																	consult
Output																									
i²C									IC																
Accuracy																									
0.25 % FSO										2															
customer										9															consult
Electrical connection																									
male plug M12x1 (5-pin) / metal											N	1	7												
male plug Binder series 723 (5-pin)											2	0	7												
customer											9	9	9												consult
Mechanical connection																									
G1/2" DIN 3852														1	0	0									
G1/2" EN 837														2	0	0									
G1/4" DIN 3852														3	0	0									
G1/4" EN 837														4	0	0									
G1/2" DIN 3852 with flush sensor	[2]													F	0	0									
G1/2" DIN 3852 open pressure port	[2]													H	0	0									
1/2" NPT														N	0	0									
1/4" NPT														N	4	0									
customer														9	9	9									consult
Seals																									
FKM																	1								
EPDM																	3								
without (welded version)	[3]																2								
customer																	9								consult
Special version																									
standard																		0	0	0					
customer																		9	9	9					consult

[1] absolute pressure possible from 0.4 bar

[2] not possible for nominal pressure p_N > 40 bar

[3] welded version only with pressure ports according to EN 837, possible for $p_N \leq 40$ bar

© 2022 BD|SENSORS GmbH - The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials.

18.02.2022

BD|SENSORS GmbH
BD-Sensors-Straße 1
D - 95199 Thierstein

Tel.: +49 (0) 92 35 / 98 11- 0
Fax: +49 (0) 92 35 / 98 11- 11

www.bdsensors.de
info@bdsensors.de