

DCT 562



Industrial Pressure Transmitter with i²C interface

Ceramic Sensor

accuracy according to IEC 60770:
0.5 % FSO

Nominal pressure

from 0 ... 400 mbar up to 0 ... 600 bar

Digital output signal

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

Special characteristic

- ▶ pressure port G 1/2" open port PVDF for aggressive media




Optional versions

- ▶ customer specific versions

Regardless of whether you need a pressure transmitter with i²C interface for an application in the laboratory area or in plant and mechanical engineering, the DCT 562 is adaptable for the detection of pressures and fill levels of pasty, contaminated Universal or aggressive media. Various mechanical and electrical connections are available.

The integrated i²C interface offers the user various options in the area of addressing and data acquisition, as well as simple control and use of the network for fast and slow bus users.

Preferred areas of use are

-  Plant and machine engineering
-  Energy industry
-  Laboratory applications



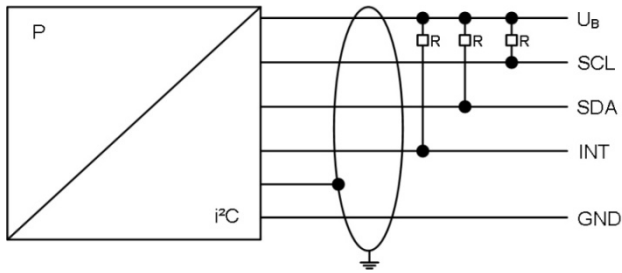
Input pressure range ¹																			
Nominal pressure gauge [bar]	-1...0	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	600	
Nominal pressure absolute [bar]	-	-	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250	400	600	
Overpressure [bar]	4	1	2	2	4	4	10	10	20	40	40	100	100	200	400	400	600	800	
Burst pressure ≥ [bar]	7	2	4	4	5	7.5	12	18	30	50	75	120	180	300	500	750	1000	1100	
Permissible vacuum	p _N ≥ 1 bar: unlimited vacuum resistance p _N < 1 bar: on request																		
¹ PVDF pressure port possible for nominal pressure ranges up to 60 bar																			
Output signal / Supply		i ² C																	
		V _S = 3.5 ... 5.5 V _{DC}																	
Performance		Accuracy ²																	
		≤ ± 0.5 % FSO																	
		Max. I/O current																	
		10 mA																	
		Long term stability																	
		≤ ± 0.3 % FSO / year at reference conditions																	
		Response time																	
		1.5 msec + transmission time (depending on bus frequency)																	
		Measuring rate																	
		500 Hz																	
² accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)																			
Thermal effects (offset and span)		Thermal error																	
		≤ ± 0.2 % FSO / 10 K																	
		In compensated range																	
		0 ... 85 °C																	
Permissible temperatures ³		Medium																	
		-40 ... 125 °C																	
		Electronics / environment																	
		-40 ... 85 °C																	
		Storage																	
		-40 ... 100 °C																	
³ for pressure port in PVDF the medium temperature is -30 ... 60 °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																	
		standard: stainless steel 1.4404 (316 L) optional for G1/2" DIN 3852 open port with nominal pressure range max. up to 60 bar: PVDF others on request																	
		Housing																	
		stainless steel 1.4404 (316 L)																	
		Seals																	
		standard: FKM option: EPDM (for p _N ≤ 160 bar) others on request																	
		Diaphragm																	
		ceramic Al ₂ O ₃ 96 %																	
		Media wetted parts																	
		pressure port, seals, diaphragm																	
Miscellaneous		Current consumption																	
		< 15 mA																	
		Weight																	
		approx. 140 g																	
		Ingress protection																	
		IP 67																	
		Installation position																	
		any																	
		Operational life																	
		100 million load cycles																	
		CE-conformity																	
		EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A) ⁴																	
⁴ This directive is only valid for devices with maximum permissible overpressure > 200 bar																			

DCT 562

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Technical Data

Wiring diagram

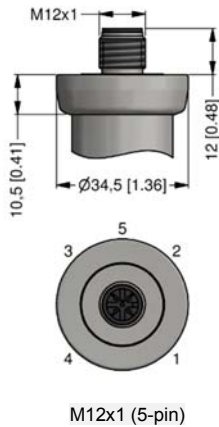


Pin configuration

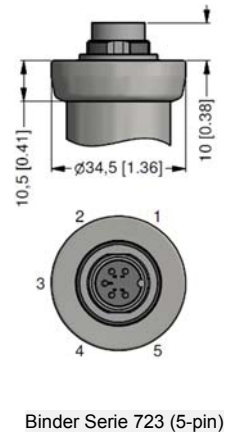
Electrical connection	M12x1 / metal (5-pin)	Binder 723 (5-pin)
Supply +	1	1
Supply -	3	3
SDA	2	2
SCL	4	4
INT	5	5
Shield	housing	housing

Electrical connections (dimensions mm/in)

Standard

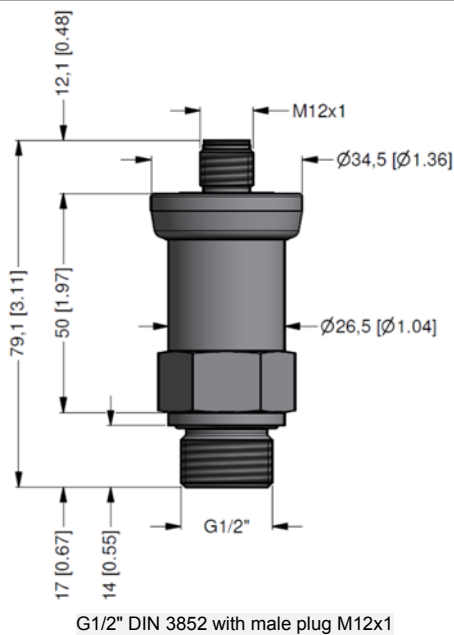


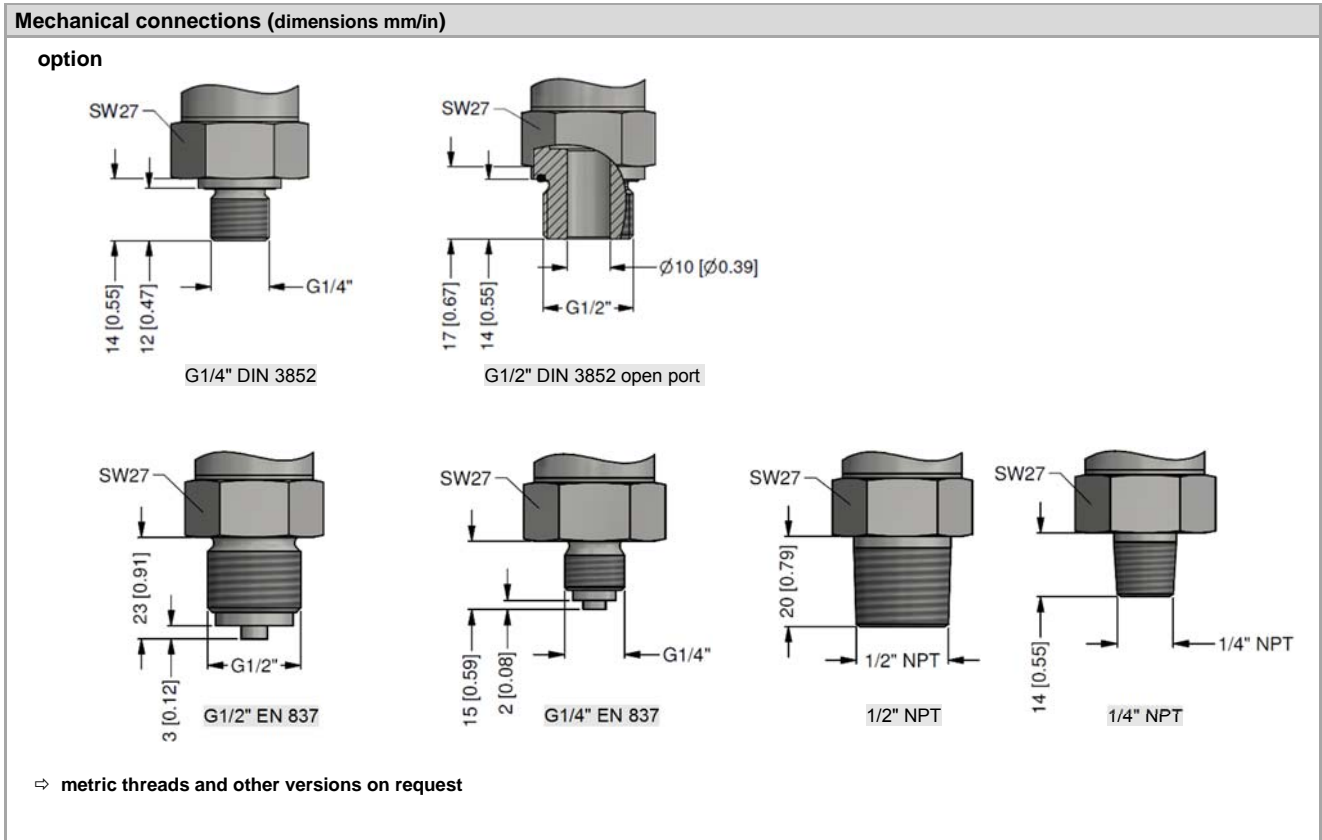
Optional



Dimensions / mechanical connections (dimensions in mm)

standard





Configuration i ² C-interface															
Stand configuration	0	5	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)					-			-							

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Ordering code DCT 562

DCT 562

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Pressure		gauge	2	5	0															
		absolute	2	5	1															
Input		[bar]																		
		0.4	4	0	0	0														
		0.6	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														
		600	6	0	0	3														
		-1 ... 0	X	1	0	2														
		customer	9	9	9	9														consult
Output		°C					I	C												
Accuracy		0.5 % FSO							5											
		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 open pressure port							H	0	0									
		1/2" NPT							N	0	0									
		1/4" NPT							N	4	0									
		customer							9	9	9									consult
Seal		FKM									1									
		EPDM ²									3									
		customer									9									consult
Pressure port		stainless steel 1.4404 (316L)										1								
		PVDF ³										B								
		customer										9								consult
Diaphragm		ceramics Al ₂ O ₃ 96 %										2								
		customer										9								consult
Special version		standard											0	0	0					
		customer											9	9	9					consult

¹ metric threads and others on request

² possible for nominal pressure ranges $p_N \leq 160$ bar

³ PVDF only with G1/2" DIN 3852 open pressure port (up to 60 bar); permissible medium temperature: -30 ... 60 °C

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