



DCT 531

Industrial Pressure Transmitter with RS485 Modbus RTU

Stainless Steel Sensor

accuracy according to IEC 60770: standard: 0.25 % FSO option: 0.1 % FSO

Nominal pressure

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

output signal

RS485 with Modbus RTU protocol

Special characteristic

- pressure value
- perfect thermal behaviour
- excellent long term stability
- reset function

Optional versions

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

The DCT 531 with RS485 interface uses the communication protocol Modbus RTU which has found the way in industrial communication as an open protocol. The Modbus protocol is based on a master slave architecture with which up to 247 slaves can be questioned by a master.

Due to the usage of high quality materials and components, the DCT 531 is suitable for almost every industrial application, if the medium is compatible with stainless steel 316L.

The modular concept of the device allows customized 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







Industrial Pressure Transmitter with RS485 Modbus RTU

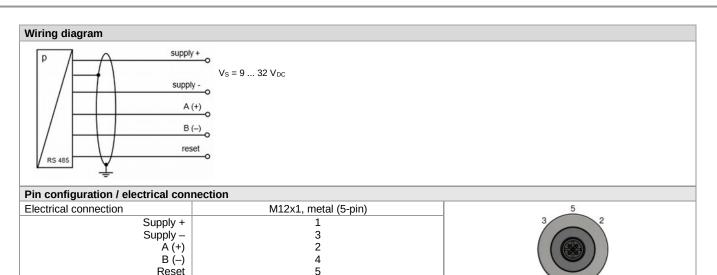
Input pressure range												
Nominal pressure gauge	[bar]	-10	0.10	0.16	0.25	0.40	0.60	1	1.6	2.5	4	6
Nominal pressure absolute	[bar]	-	-	-	-	0.40	0.60	1	1.6	2.5	4	6
Overpressure	[bar]	5	0.5	1	1	2	5	5	10	10	20	40
Burst pressure ≥	[bar]	7.5	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50
Nominal pressure gauge / absolute	[bar]	10 16 25 40 60 100 1		16	.60 250		400					
Overpressure	[bar]	40 80			80	105	210	600	60	0 2	L000	1000
Burst pressure ≥	[bar]	50 120 120		210	420	1000 1000		00 (1250 12			
Vacuum resistance		$p_N \ge 1$ bar: unlimited vacuum resistance $p_N < 1$ bar: on request										
Output signal												
Digital		RS 485	with Mod	bus RTL	protoco	l (pressure)					
Supply												
Direct current		$V_{S} = 9$	32 V _{DC}									
Performance												
Accuracy ¹		standard: ≤± 0.25 % FSO option: ≤± 0.10 % FSO										
Long term stability					ference	conditions						
Measuring rate		500 Hz										
Delay time		500 mse	:C									
¹ accuracy according to IEC 60770	0 – lim	it point adju	ustment (n	on-linearit	y, hystere	sis, repeatab	nility)					
Thermal effects (Offset and					-							
		≤ ± 0.75										
In compensated range		-20 85										
Permissible temperatures												
Permissible temperatures		medium: electroni storage:		onment:	-40	125 °C) 85 °C) 100 °C						
Electrical protection		J										
Short-circuit protection		permane	ent									
Reverse polarity protection		on supply connection no damage, but also no function										
Electromagnetic compatibility	-		•			to EN 6132						
Mechanical stability				, ,								
Vibration		10 a RM	IS (25	2000 Hz)	acc	ording to I	DIN EN 60	0068-2-6			
Shock		100 g / 1			<u> </u>		according to DIN EN 60068-2-27					
Materials						4.00	o. ag . o .			•		
Pressure port / housing		stainless	steel 1 /	1404 (31	61)							
Seals		stainless steel 1.4404 (316 L) standard: FKM option: EPDM; welded version ² (for p _N ≤40 bar) others on request						ıuest				
Diaphragm		stainless				<u>, , ,</u>	,					
Media wetted parts		pressure										
² welded version only with pressure	e ports											
Miscellaneous												
Weight		approx.	210 g									
Ingress protection		IP67										
Current consumption	-	typ. 7 m/	Α									
Operational life	\neg		on load c	vcles								
Installation position	_	any ³		,								
CE-conformity	-	EMC Dir	ective: 2	\1//2∩/⊏	11	Dros	ssure Equ	inment Di	rective: 3	011/69/5	II (modi	ام ۱۵ ما
³ Pressure transmitters are calibrated deviations in the zero point for pro-		a vertical p	osition witl					<u> </u>				

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

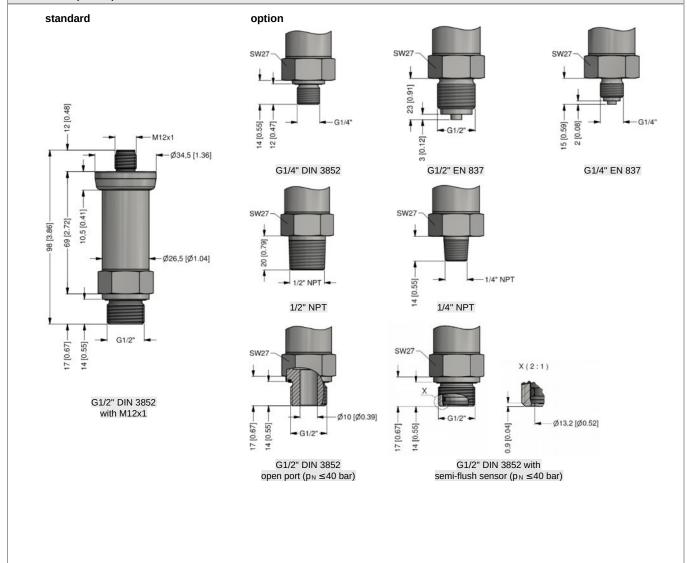
Reset Shield

metric threads and other versions on request

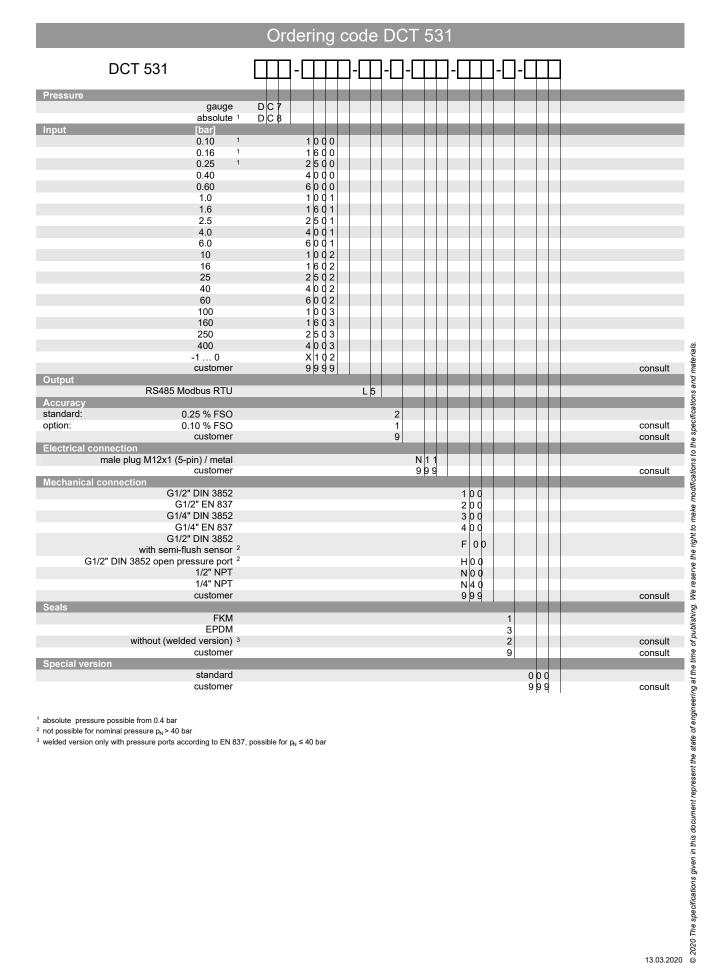


plug housing

Dimensions (mm /	in)



Configuration Modbus RTU					
Standard configuration	001	-	1	-	1
Address					
Address	001				
	247				
Baud Rate					
4800 Bd			0		
9600 Bd			1		
19200 Bd			2		
38400 Bd			3		
Parity					
None					0
Odd					1
Even					2
Configuration code (to specify with order)		-		-	



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 $p_{N} \le 40$ bar