

CCM-P-01-500



- battery powered precision digital pressure gauge
- nominal pressure: from 0...100 mbar up to 0...400 bar
- stainless steel sensor
- accuracy 0.1 % / 0.25 % span
- data logger including software
- graphic display
- stainless steel housing Ø 100 mm
- communication interface USB 2.0
- zero point calibration, turn off and switch-off automatic
- background illumination

The digital pressure gauge **CCM-P-01-500** is a precision device fulfilling highest demands. That was developed especially for the process monitoring and calibration.

Outstanding measuring qualities and an intuitive operation characterise the CCM-P-01-500. The battery-powered digital pressure gauge can be used e.g. for controlling pressure courses or calibrating pressure transmitters.

The integrated data logger is able to record pressure and temperature values linearly and cyclically which can be analysed with software DAQ.

PREFERRED AREAS OF USE ARE



Plant and Machine Engineering



Laboratory applications



Calibrating techniques

TECHNICAL DATA

Input pressure												
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	1	1	1	2	5	5	10	10	17.5	35	
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]	35	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 resistant; P _N < 1 bar: on request									

Performance	
Accuracy ¹	standard for P _N ≥ 0.4 bar: ≤ ± 0.1 % FSO and for P _N < 0.4 bar: ≤ ± 0.25 % FSO
Long term stability	≤ ± 0.1 % span / year at reference conditions
Measuring rate / Display	1 or 2 measurements per second
¹ accuracy according to EN IEC 62828-2- minimum value setting (non-linearity, hysteresis, repeatability)	
Thermal effects (Offset and Span)	
Temperature error	included in the accuracy information (is valid for compensated range 0 ... 50 °C)
Permissible temperatures	
Permissible temperatures	medium: -10 ... 55 °C environment: -10 ... 55 °C storage: -20 ... 70 °C
Materials	
Pressure port / housing	stainless steel 1.4404 (316L)
Display housing	stainless steel 1.4301 (304)
Seals (media wetted)	FKM, without (welded version)
Diaphragm	Stainless steel 1.4435 (316L)
Media wetted parts	pressure port, seal, diaphragm

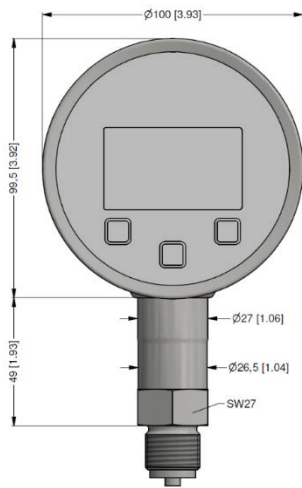
Miscellaneous		
Display	graphic LC display:	visible area 55 x 46 mm; (resolution 128x64) figure height 5.5 mm (displaying of pressure value) measured value display: max. 7 digits, depending on pressure range temperature display, time, 100-segment-bargraph, potential input value illumination period and intensity adjustable
Temperature display range	accuracy: ± 2 K resolution: 0.1 K display: -10 ... 55 °C	
Adjustable units pressure and temperature	[mbar], [bar], [psi], [mmHg], [cmHg], [inHg], [kPa], [MPa], [hPa], [mmH ₂ O], [mH ₂ O], [inH ₂ O], [kg/cm ²], [°C], [°F], [K]	
Data logger	modes: single, cyclic, linear, off recording pressure values and sensor temperature measuring value interval adjustable (hrs, min, sec, 20 ms, daily at a defined time) measurement rate adjustable (1/s, 2/s or 50/s only with 20 ms measured value interval) max. 600798 values	
Current consumption	without background illumination: approx. 1.3 mA with background illumination: approx. 16 mA (depending on adjusted intensity) standby mode: approx. 1.2 µA	
Supply	3x 1.5 V: Duracell Plus battery, DUR087033, AA (LR6)	
Ingress protection	IP 67	
Mounting position ²	any	
Weight	approx. 680 g	
A / D-converter resolution	16 bit (module)	
Battery life	standard use: > 2,000 h	standby mode: at least 5 years (with measurement rate 1/s and 2/s)
Operational life	100 million load cycles	
CE-conformity	EMC directive: 2004/108/EC pressure equipment directive: 97/23/EC (Module A) ³ electromagnetic compatibility: according to EN 61326	

² 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 $P_N \leq 1$ bar.

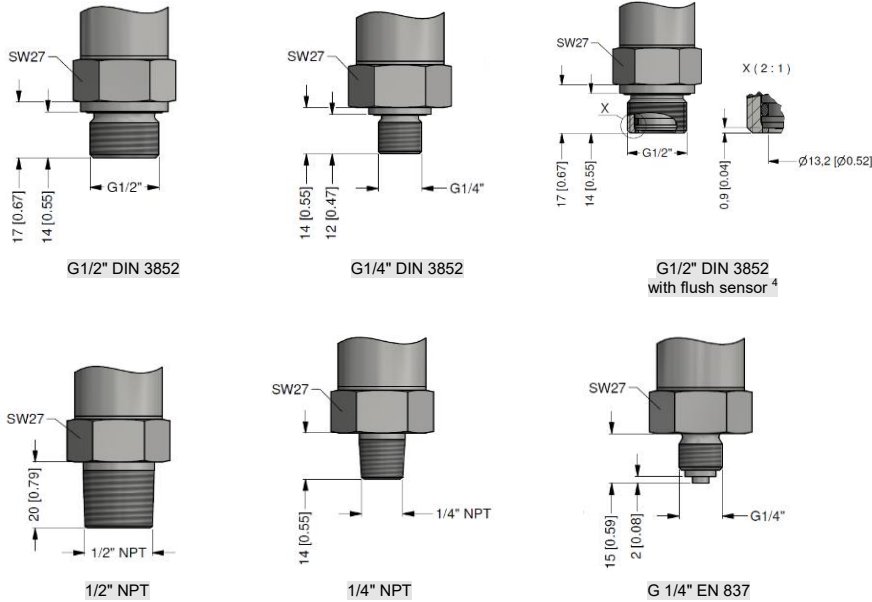
³ This directive is only valid for devices with maximum permissible overpressure > 200 bar.

DIMENSION DRAWINGS

standard

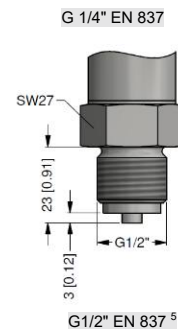
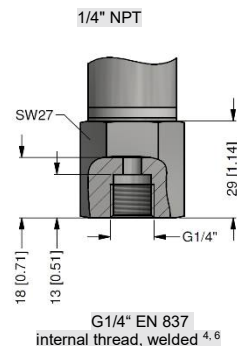
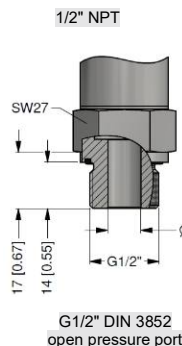
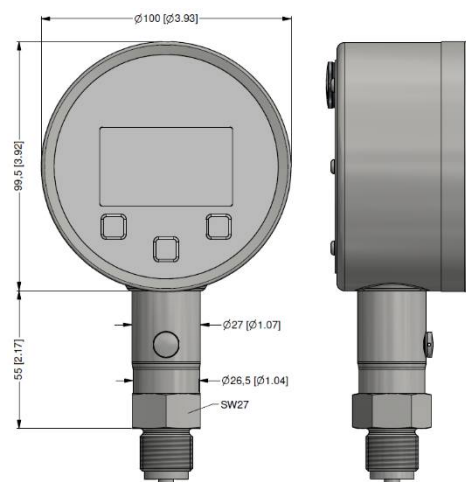


optional



option: gauge version, potted

(special version 507)



⇒ for nominal pressure $p_N > 40$ bar increases the length of devices by 9 mm

⇒ metrical threads and other variations on request

⁴ only possible for nominal pressure ranges $P_N \leq 40$ bar

⁵ for $P_N \leq 40$ bar $L = 49$ mm; for $P_N > 40$ bar $L = 58$ mm

⁶ different adapter are available as accessories

The manufacturer provides the EU declaration of conformity.

Calibration - All production undergoes output control, which is performed by comparison with standards. The traceability of standards and working gauges is ensured in accordance with Act No.505/1990, as amended, on metrology.

The manufacturer offers the possibility of delivering sensors calibrated in its own calibration laboratory, accredited according to ČSN EN ISO / IEC 17025: 2018

ACCESSORIES

Accessories are not in scope of supply and have to be ordered separately!

Software DAQ (Communication, Configuration, Measurement display, Protocol creation)

Optionally software DAQ and an interface cable can be ordered. The software is also available for download on our home page.

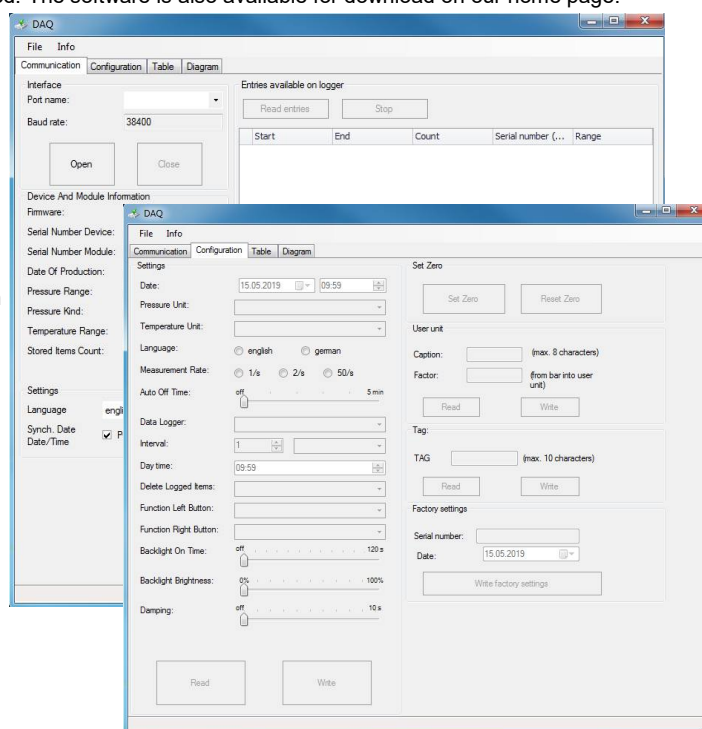
Software:

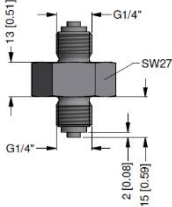
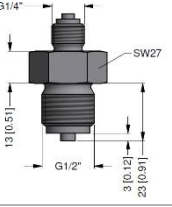
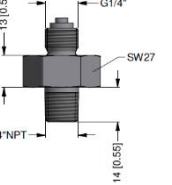
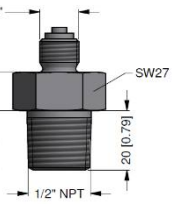
- display of device information (serial number, pressure and temperature range, ...)
- configuration area for all parameters
- download area for recorded data:
 - date
 - pressure measurement
 - temperature measurement
- protected data acquisition
- measured value representation in tabular or graphic form
- free scaling of the diagram
- creation of measurement / test report as a PDF file
- data export



Interface cable USB (type A) to mini connector (3.5 mm) with integrated USB converter
L: 1.7 m

Ordering number: ZUSBCD01



Adapter for pressure port G 1/4" EN 837 internal thread, welded		
G 1/4" EN 837 Ordering number: Z5010205		Adapter for pressure sensor module with pressure port G 1/4" EN 837 internal thread, welded external thread: G 1/4" EN 837 external thread: G 1/4" EN 837
G 1/2" EN 837 Ordering number: Z5010205		Adapter for pressure sensor module with pressure port G 1/4" EN 837 internal thread, welded external thread: G 1/4" EN 837 external thread: G 1/2" EN 837
1/4" NPT Ordering number: Z5010205		Adapter for pressure sensor module with pressure port G 1/4" EN 837 internal thread, welded external thread: G 1/4" EN 837 external thread: 1/4" NPT
1/2" NPT Ordering number: Z5010205		Adapter for pressure sensor module with pressure port G 1/4" EN 837 internal thread, welded external thread: G 1/4" EN 837 external thread: 1/2" NPT
* others on request Additional accessories on request		



ORDER CODE

CCM-P-01-500-----

Pressure												
Gauge	M	0	K									
Absolute ($P_N \geq 0,4$ bar)	M	0	L									
Input [bar]												
0 ... 0,1 ($P_N \geq 0,4$ bar)				1	0	0	0					
0 ... 0,16 ($P_N \geq 0,4$ bar)				1	6	0	0					
0 ... 0,25 ($P_N \geq 0,4$ bar)				2	5	0	0					
0 ... 0,4				4	0	0	0					
0 ... 0,6				6	0	0	0					
0 ... 1				1	0	0	1					
0 ... 1,6				1	6	0	1					
0 ... 2,5				2	5	0	1					
0 ... 4				4	0	0	1					
0 ... 6				6	0	0	1					
0 ... 10				1	0	0	2					
0 ... 16				1	6	0	2					
0 ... 25				2	5	0	2					
0 ... 40				4	0	0	2					
0 ... 60				6	0	0	2					
0 ... 100				1	0	0	3					
0 ... 160				1	6	0	3					
0 ... 250				2	5	0	3					
0 ... 400				4	0	0	3					
0 ... 600				6	0	0	3					
-1 ... 0				X	1	0	2					
Customer				9	9	9	9					
Customer underpressure				X	X	X	X					
Version												
Standard							0					
Accuracy												
0,1 % FSO ($P_N \geq 0,4$ bar)							1					
0,25 % FSO ($P_N < 0,4$ bar)							2					
Customer							9					
Mechanical connection												
G 1/2" DIN 3852							1	0	0			
G 1/2" EN 837							2	0	0			
G 1/4" DIN 3852							3	0	0			
G 1/4" EN 837							4	0	0			
G 1/2" DIN 3852 with flush sensor ($P_N \leq 0,4$ bar)							F	0	0			
G 1/2" DIN 3852 open pressure port							H	0	0			
1/2" NPT							N	0	0			
1/4" NPT							N	4	0			
G 1/4" EN 837 internal thread, welded ($P_N \leq 0,4$ bar) ¹							J	0	3			
Customer							9	9	9			
Seals												
Viton (FKM)									1			
Customer									9			
Special version												
Standard										5	0	0
Gauge version, potted										5	0	7
Customer										9	9	9

1 - different connection versions with optional adapters possible (see accessories)

Manufacturer reserves the right to change sensor specifications without further notice.

