



DM01-500 DM01-500 HD

Battery Powered Precision Digital Gauge

For High Pressure

Stainless Steel Sensor

class 0.05

Nominal pressure

DM01-500
from 0 ... 100 mbar up to 0 ... 400 bar

DM01-500 HD
from 0 ... 600 bar up to 0 ... 2200 bar

Special characteristics

- ▶ data logger incl. software
- ▶ graphic display
- ▶ stainless steel housing \varnothing 100 mm
- ▶ communication interface USB 2.0

Optional

- ▶ accredited calibration certificate
- ▶ IS-version zone 1

Functions

- ▶ zero point calibration
- ▶ data logger
- ▶ turn off automatic
- ▶ configurable switch-off automatic
- ▶ background illumination

The digital pressure gauge DM01-500 and DM01-500 HD is a precision device fulfilling highest demands. It was developed especially for the process monitoring and calibration.

Outstanding measuring qualities and an intuitive operation characterise the DM01-500 and DM01-500 HD. 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 BD|LOG.

Preferred areas of use are



Calibrating techniques



Laboratory applications



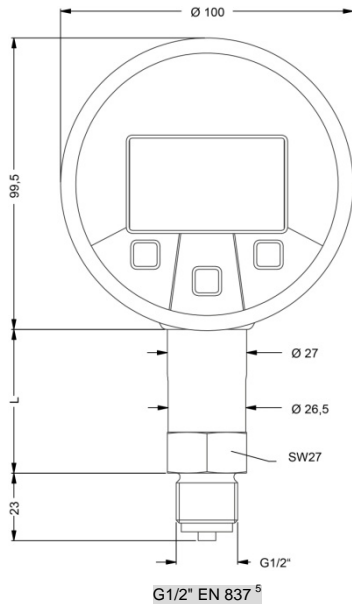
Plant and Machine Engineering



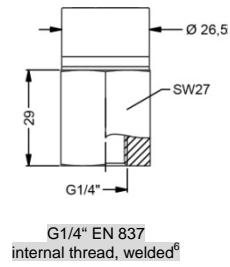
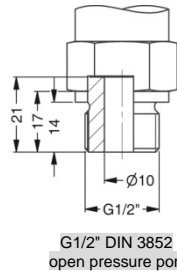
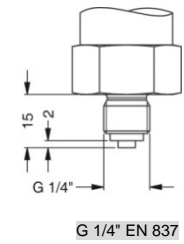
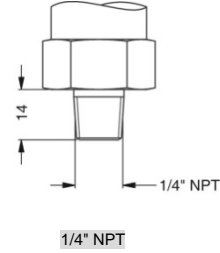
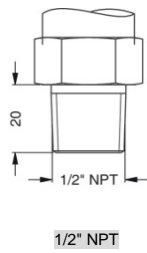
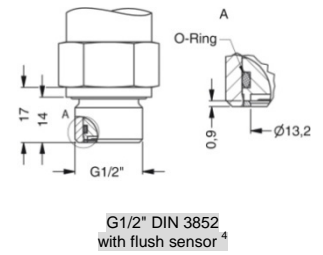
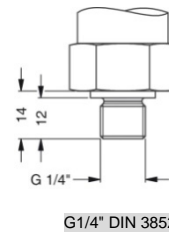
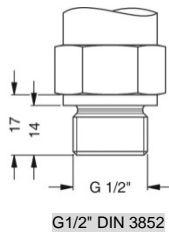
Input pressure DM01-500													
Nominal pressure gauge / abs.	[bar]	-1...0	0.10	0.16	0.25	0.40	0.60	1	1.6	2.5	4	6	
Overpressure	[bar]	5	1	1	1	2	5	5	10	10	17.5	35	
Burst pressure \geq	[bar]	7.5	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50	
Nominal pressure gauge / abs.	[bar]	10	16	25	40	60	100	160	250	400			
Overpressure	[bar]	35	80	80	105	210	600	600	1000	1000			
Burst pressure \geq	[bar]	50	120	120	210	420	1000	1000	1250	1250			
Vacuum resistance		$P_N \geq 1$ bar: unlimited vacuum resistant $P_N < 1$ bar: on request											
Input pressure DM01-500 HD													
Nominal pressure gauge	[bar]	600			1000			1600			2000		2200
Overpressure	[bar]	800			1400			2200			2800		2800
Performance													
Accuracy ¹		standard for $P_N \geq 0.4$ bar: $\leq \pm 0.05$ % BFSL standard for $P_N < 0.4$ bar: $\leq \pm 0.125$ % BFSL											
Long term stability		$\leq \pm 0.1$ % FSO / year											
Measuring rate / Display		1 or 2 measurements per second											
¹ accuracy according to IEC 60770 – minimum value setting (non-linearity, hysteresis, repeatability)													
Thermal effects (Offset and Span)													
Temperature error		for nominal pressure ranges $P_N \leq 160$ bar: included in the accuracy information for nominal pressure ranges $P_N > 160$ bar: tolerance band $\leq \pm 0.75$ % FSO (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													
		DM01-500						DM01-500 HD					
Pressure port / housing		stainless steel 1.4404 (316L)						stainless steel 1.4542 (17-4 PH) / 1.4404 (316L)					
Display housing		stainless steel 1.4301 (304)						stainless steel 1.4301 (304)					
Seals (media wetted)		FKM, without (welded version)						without					
Diaphragm		Stainless steel 1.4435 (316L)						stainless steel 1.4542 (17-4 PH)					
Media wetted parts		pressure port, seal, diaphragm						pressure port, diaphragm					
Explosion protection													
AX16-DM01-500		IBExU12ATEX1108 X											
AX16-DM01-500 HD		zone 1: II 2G Ex ia IIC T4 Gb											
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 temperature display, time, 100-segment-bargraph, potential input value background illumination: illumination period and intensity adjustable							
Temperature display range		accuracy: ± 2 K				resolution: 0.1 K							
		display: -10 ... 55 °C											
Data logger		recording pressure values and sensor temperature (min, hrs, daily at a defined time) max. 8500 values modes: cyclic, linear measuring value interval adjustable											
Current consumption		without background illumination:				approx. 1.3 mA							
		with background illumination:				approx. 16 mA (depending on adjusted intensity)							
		standby mode:				approx. 1.2 μ A							
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											
Battery life		standard use: > 2,000 h				standby mode: at least 5 years							
Load cycles		> 100 x 10 ⁶											
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.													

Dimensions (in mm)

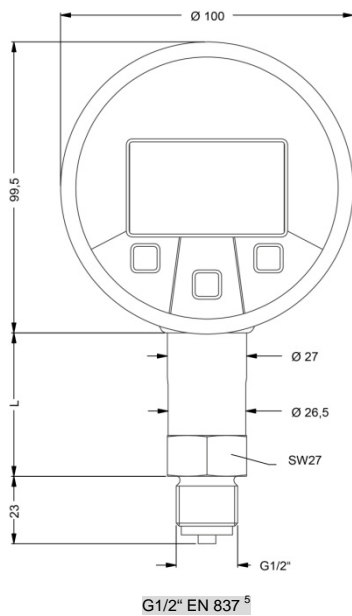
DM01 - 500
standard



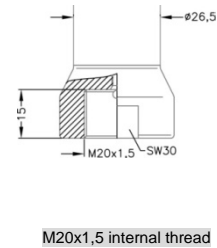
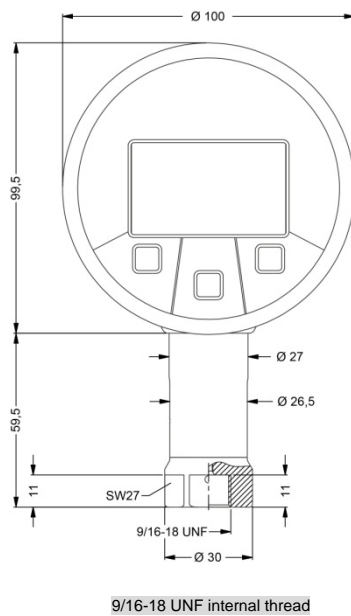
optional



DM01-500 HD
standard



optional



⇒ metrical threads and other variations on request

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

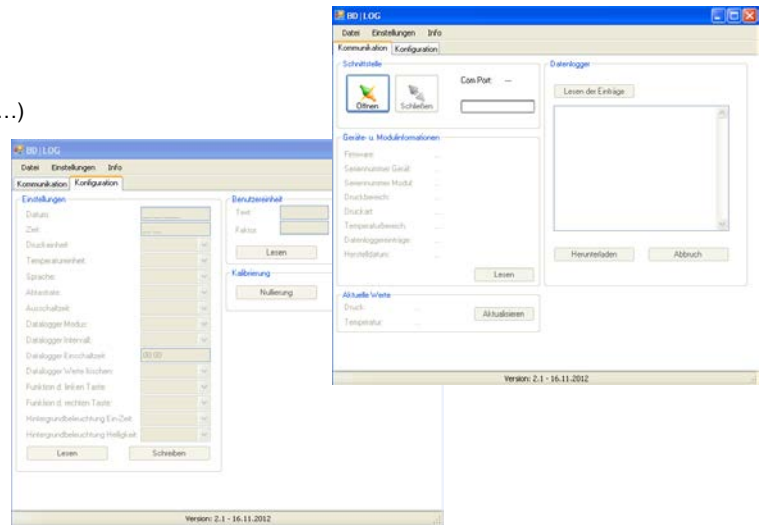
⁵ for $P_N \leq 40$ bar $L = 49$ mm; for $P_N > 40$ bar $L = 58$ mm; for $P_N = 1000$ and 1600 bar $L = 49.5$ mm

⁶ different adapter are available as accessories

BD|LOG software

Software:

- display of device informations (serial number, pressure und temperature range,...)
- configuration area for all parameters
- download area for recorded data:
 - date
 - pressure measurement
 - temperature measurement
- currently measurement



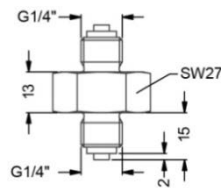
Scope of delivery

- software

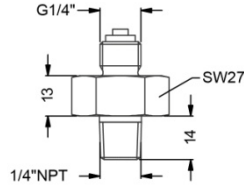
Option:

- interface cable (1.7 m) and USB adapter

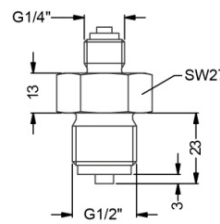
Adapter for pressure port G 1/4" EN 837 internal thread, welded:



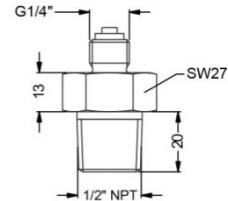
G1/4" EN 837
 ordering code: Z5010203



G1/4" NPT
 ordering code: Z5010204



G1/2" EN 837
 ordering code: Z5010202



G1/2" NPT
 ordering code: Z5010205



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