



## SST-DM01-500HD

### Battery Powered Precision Digital Test Gauge

Pressure up to 32000psi

Hazardous Area Zone 0: II 1G Ex ia IIC/IIB T4 Ga

class 0.125

#### Nominal pressure

from 0 ... 1000 bar up to 0 ... 2200 bar  
(0 ... 14504 psi up to 0 ... 32000 psi)

#### Special characteristics

- ▶ detachable display and pressure sensor module
- ▶ pressure sensor welded
- ▶ data logging up to 50Hz
- ▶ graphic display
- ▶ stainless steel housing Ø 100 mm
- ▶ communication interface USB 2.0
- ▶ up to 6000 bar burst pressure

#### Optional

- ▶ accredited calibration certificate
- ▶ IS-version zone 1 or zone 0
- ▶ software incl. USB converter
- ▶ protective rubber cover
- ▶ service case with accessories

#### Functions

- ▶ zero-point calibration
- ▶ data logger
- ▶ configurable switch-off automatic
- ▶ background illumination a. m. m.

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

Outstanding measuring qualities and an intuitive operation characterize the SST-DM01-500HD precision pressure and temperature data logger.

The battery-powered digital pressure gauge can be used for monitoring pressure within piping, calibrating pressure transmitters or checking valve functions with 50Hz data logging. **The display / logger can be detached from the process sensor in-situ allowing data to be downloaded without shutting down of processes.**

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

#### Example applications:



Calibrating other pressure sensors



Safety valve test and process verification



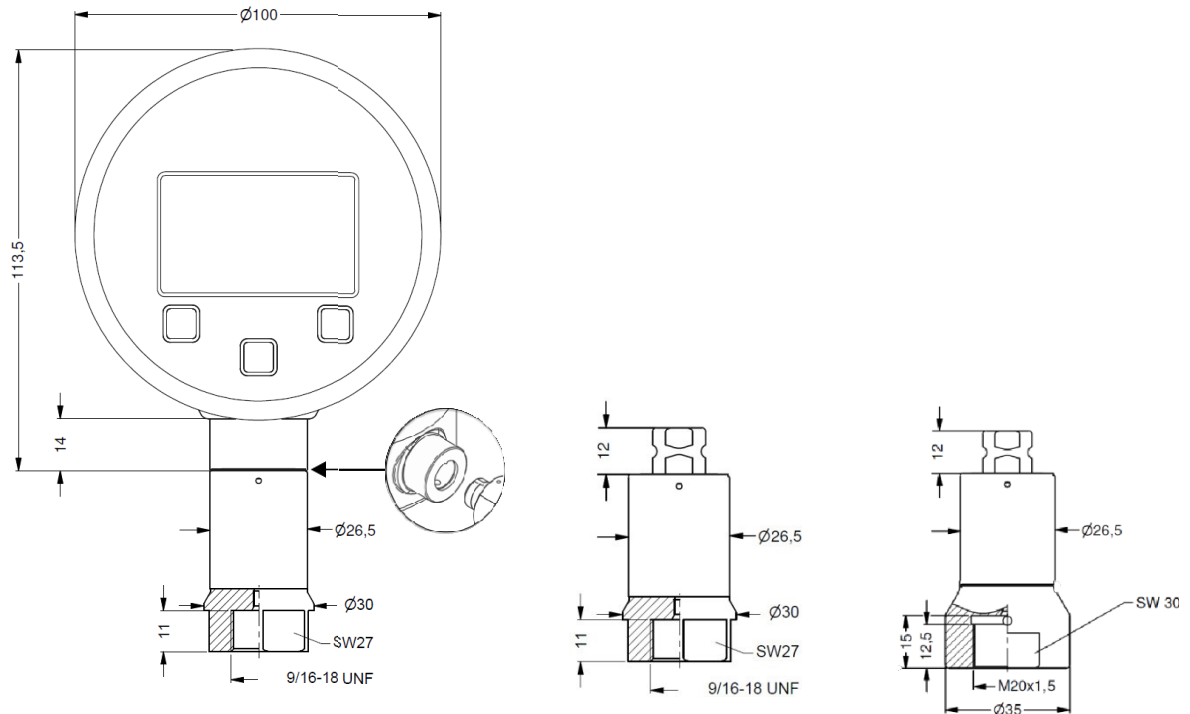
Oil & Gas installations and monitoring hydrostatic testing and pipeline



Input pressure					
Nominal pressure gauge	[bar]	1000	1600	2000	2200
Overpressure	[bar]	1400	2200	2800	2800
Burst pressure $\geq$	[bar]	4000	6000	6000	6000
Performance					
Accuracy <sup>1</sup>		$\leq \pm 0.125\%$ BFSL			
Long term stability		$\leq \pm 0.1\%$ FSO / year at reference conditions			
Measuring rate / Display		1, 2 or 50 measurements per second			
<sup>1</sup> accuracy according to IEC 60770 – minimum value setting (non-linearity, hysteresis, repeatability) - at room temperature 20 °C					
Thermal effects (Offset and Span)					
TC, average	[% FSO / 10 K]	$\leq \pm 0.3\%$ (is valid for compensated range 0 ... 50 °C)			
Permissible temperatures					
Scope of applications		medium:	-10 ... 55 °C		
		environment:	-10 ... 55 °C		
		storage:	-20 ... 70 °C		
Materials					
Pressure port		stainless steel 1.4542 (17-4 PH)			
Housing (pressure port)		stainless steel 1.4404 (316L)			
Display housing		stainless steel 1.4301 (304)			
Seals		without (welded)			
Diaphragm		stainless steel 1.4542 (17-4 PH)			
Media wetted parts		pressure port, diaphragm			
Explosion protection					
Display		IBExU12ATEX1108 X standard variant for zone 1: II 2G Ex ia IIC/IIB T4 Gb variant with conductive front foil for zone 0: II 1G Ex ia IIC/IIB T4 Ga			
Sensor module		IBExU10ATEX1026 U			
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		
		background illumination:	illumination period and intensity adjustable		
Temperature display range		accuracy:	$\pm 2$ K		
		resolution:	0.1 K		
		display:	-10 ... 55 °C		
Units for pressure (adjustable)		[mbar], [bar], [psi], [mmHg], [cmHg], [inHg], [kPa], [MPa], [hPa], [mmH <sub>2</sub> O], [mH <sub>2</sub> O], [inH <sub>2</sub> O], [kg/cm <sup>2</sup> ]			
Units for temperature (adjustable)		[°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 $\mu$ A		
Supply		3x 1.5 V: Duracell Plus battery, DUR087033, AA (LR6)			
Ingress protection		IP 67			
Mounting position		any			
Weight		approx. 680 g			
A / D-converter resolution		16-bit (pressure sensor module)			
Battery life		standard use: > 2.000 h	standby mode: at least 5 years (with measurement rate 1/s and 2/s)		
Load cycles		> 100 x 10 <sup>6</sup>			
CE-conformity		EMC directive:	2004/108/EC		
		pressure equipment directive:	97/23/EC (Module A)		
		electromagnetic compatibility:	according to EN 61326		

**Dimensions (in mm)**

**Display and detachable pressure sensor module**



**other threads and variations on request**

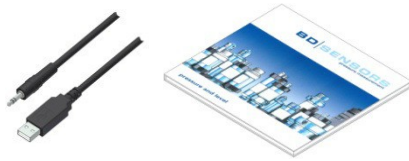
**Accessories are not in scope of supply and have to be ordered separately!**

**Software BD|DAQ lite version (Communication, Configuration)**

Optionally software BD|DAQ lite and an interface cable can be ordered. The software is also available for download on our homepage.

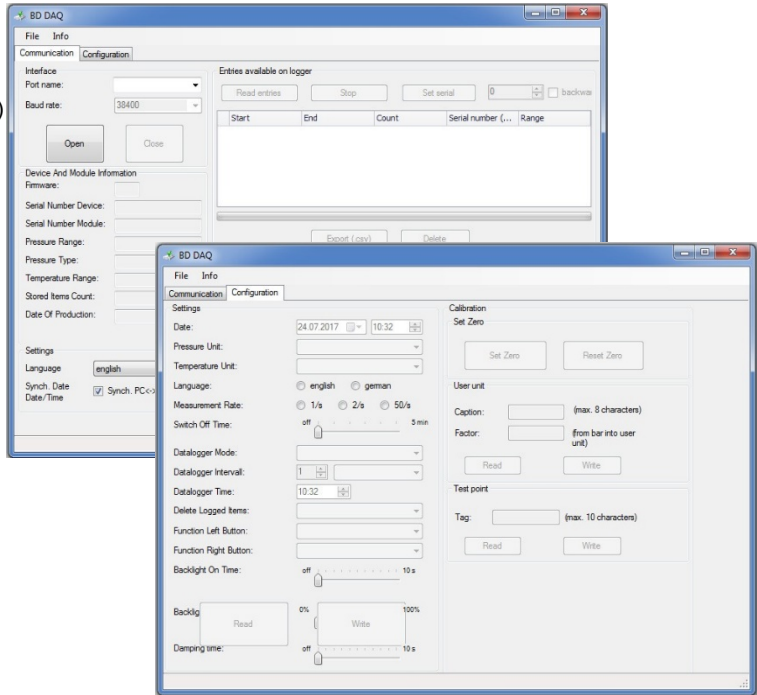
**Software:**

- 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
- actual value



Interface cable with USB converter

Part number: SSTZUSBCD01



**Equipment**

<p>Pelican protective case</p>		<p>Orange colour with foam cut outs. Corrosion-proof. Crushproof Dustproof Waterproof</p> <p>Hard shell case.</p> <p>Dimension in mm (L x W x H): 215 x 150 x 94</p>
<p>Part number: SST-DM01-ENC Additional batteries (3 per pack)</p>		<p>For IS-version use only: 3 x 1.5 V / AA Duracell Power Plus</p>
<p>Part number: DM01-BATT (pack of 3) Protective rubber cover</p>		<p>Rubber protection</p>
<p>Part number: SST-DM01-Z1002648 <i>additional accessories on request</i></p>		

# Ordering code SST-DM01-500HD-

**DISPLAY:** SST-DM01-500HD-

A 2 G

IS (zone 0) with communication interface

**TRANSMITTER:** SST-DM01-500HD-

M 0 K - [ ] [ ] [ ] [ ] - E - B 2 - [ ] [ ] [ ] [ ] - 2 - 5 9 6 - [ ] [ ] [ ] [ ]

Input		[bar]																	
		1000	1	0	0	4													
		1600	1	6	0	4													
		2000	2	0	0	4													
		2200	2	2	0	4													
Mechanical connection																			
												9/16-18UNF internal thread		V 0 0					
												M20x1.5 internal thread		D 2 8					
Accessories																			
USB converter (incl. software BD DAQ)												SSTZUSBCD01							
Protective Rubber Cover												SSTZ1002648				K   I   T			
Protective Portable PELI Case												SSTD01-ENC							
Replacement batteries												DM01-BATT							
Calibration																			
Factory Calibration (5 points)												DM01-500HD-FAC-CAL							
UKAS traceable calibration (5 points)												DM01-500HD-UKAS-TRACE							
UKAS certified lab calibration (5 points)												DM01-500HD-UKAS-FULL							

**Ordering examples:**

Device SST-DM01-500HD-A2G

Example 1: M0K-2204-E-B2-V00-2-596 (transmitter only: 2200bar, IS version Zone 0, 0.125% BFS, 9/16"-18UNF internal thread, no seal (welded), standard)

Example 2: M0K-1004-E-B2-D28-2-596-KIT (transmitter only: 1000bar, IS version Zone 0, 0.125% BFS, M20x1.5 internal thread, no seal (welded), standard),

KIT Included: USB converter (incl. software BD|DAQ), Protective Rubber Cover, Protective Portable PELI Case

When ordering both parts, specify display and transmitter part numbers as follows: SST-DM01-500HD-A2G- M0K-2204-E-B2-V00-2-596

**NOTE:** Other process threads and pressure ranges available