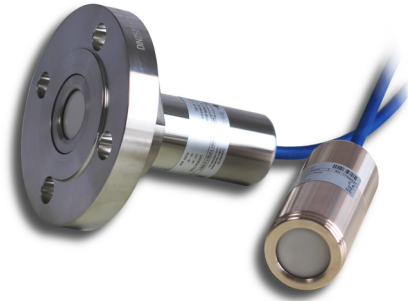


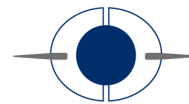
## Level Sensor Series 901



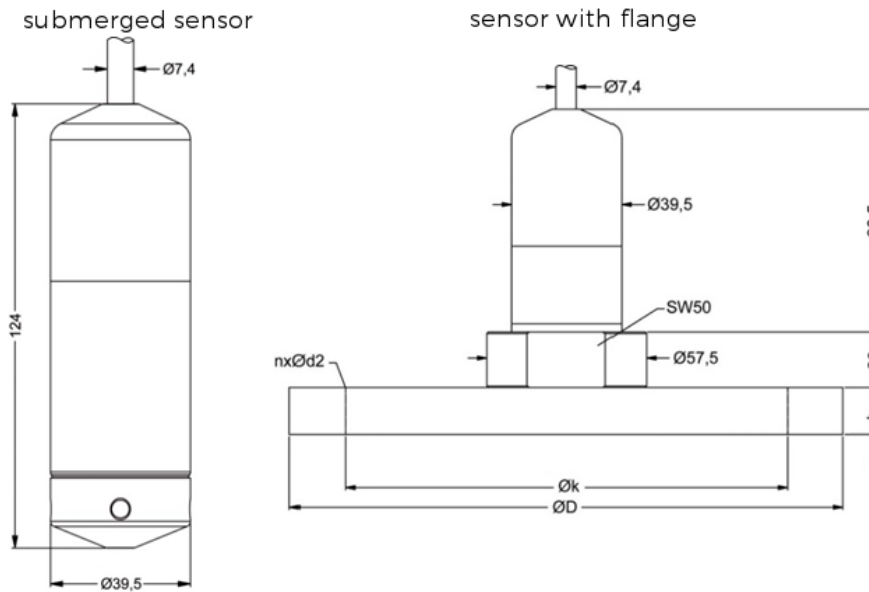
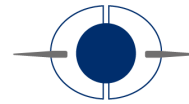
The series 901 level sensors are designed for reliable operation in rough environments like shipbuilding and offshore industries. The sensors are suitable for level measurement of fluids or pasty media in open tanks, containers or reservoirs.

Typical areas of use are ballast tanks, fuel and oil tanks as well as service and waste water tanks. The sensors as standard comply with the requirements of Germanischer Lloyd, Lloyd's Register as well as the European Standards of CE-conformity. The certificates are available on request. The measuring result is transmitted via an electrical signal.

Pressure Range													
nominal pressure* [bar]	0,04	0,06	0,1	0,16	0,25	0,4	0,6	1	1,6	2,5	4	5	
level [mH <sub>2</sub> O]	0,4	0,6	1	1,6	2,5	4	6	10	16	25	40	50	
overpressure [bar]	2	2	4	4	6	6	8	8	15	25	25	35	
perm. vacuum [bar]	-0,2		-0,3		-0,5				-1				
* available in gauge and absolute; nominal pressure ranges absolute from 1 bar													
Output Signal / Supply													
standard	2-wire: 4 ... 20 mA / U <sub>B</sub> = 9 ... 32 V <sub>DC</sub> / U <sub>B</sub> rated = 24 V <sub>DC</sub>												
option ATEX-version	2-wire: 4 ... 20 mA / U <sub>B</sub> = 14 ... 28 V <sub>DC</sub> / U <sub>B</sub> rated = 24 V <sub>DC</sub>												
Performance													
accuracy*	standard: ≤ ± 0,25 % FSO option: for P <sub>N</sub> ≥ 0,6 bar 3: ≤ ± 0,1 % FSO												
permissible load	R <sub>max</sub> = [(U <sub>B</sub> - U <sub>B</sub> min) / 0,02 A] Ω												
long term stability	≤ ± 0,1 % FSO / year at reference conditions												
influence effects	supply: 0,05 % FSO / 10 V permissible load: 0,05 % FSO / kΩ												
turn-on time	700 ms												
average response time	< 200 ms / average measuring rate 5/s												
max. response time	380 ms												
*accuracy according to IEC 60770 - limit point adjustment (non-linearity, hysteresis, repeatability)													
Thermal Effects / Permissible Temperatures													
thermal error	≤ ± 0,1 % FSO / 10 K in compensated range - 20 ... 80 °C												
permissible temperatures	medium / electronics / environment: -25 ... 125 °C storage: -40 ... 125 °C												
Electrical Protection													
short-circuit protection	permanent												
reverse polarity protection	no damage, but also no function												
electromagnetic compatibility	emission and immunity according to - EN 61326 - DNV GL												
Mechanical Stability													
vibration	4 g (basis: DIN EN 60068-2-6)												
Electrical Connection													
cable	shielded TPE- cable* with integrated air tube for atmospheric reference												
*TPE-cables are suited for a temperature range up to 70°C. For higher temperatures we recommend consultation with Stein Sohn before use.													



Materials	
casing	standard: stainless steel 1.4404 option: CuNi10Fe1Mn (sea-water proof)
seals (media wetted)	FKM
diaphragm	ceramic Al <sub>2</sub> O <sub>3</sub> 96 %
cable sheath	TPE -U (flame-resistant, halogen free, increased resistance against oil and gasoline, resistant against salt, sea water, heavy oil)
Miscellaneous	
ingress protection	IP 68
current consumption	max. 21 mA
weight	min. 650 g (without cable)
CE-conformity	EMC Directive: 2014/30/EU ATEX-Directive: 2014/34/EU
Pt 100-temperature sensor (optional)	cable length: max. 5m connections: 3-wire resistance: 100 Ω bei 0 °C temperature coefficient: 3850 ppm/K supply Is: 0,3 ... 1,0 mA <sub>DC</sub>
ATEX Protection	
approval	IBExU 17 ATEX 1030 X zone 0: II 1G Ex ia IIB T4 Ga
safety maximum values	U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> = 660 mW, C <sub>i</sub> = 105 nF; L <sub>i</sub> = 5 μH; the supply connections have an inner capacity of max. 140 nF opposite the enclosure
temperature	in zone 0 6 : -20 ... 60 °C with patm 0,8 bar to 1,1 bar from zone 1: -25 ... 70 °C
connection cables	cable capacity: signal line/shield as well as signal line/signal line: 160 pF/m cable inductance: signal line/shield as well as signal line/signal line: 1 μH/m
Connection	
2-wire-system (current)	2-wire-system (current) with Pt 100
Pin Configuration	
electrical connection	cable colours (IEC 60757)
supply Vs+	wh (white)
supply Vs-	bn (brown)
Pt 100:	
supply T+	ye (yellow)
supply T-	gy (grey)
supply T-	pk (pink)
shield	gnye (green-yellow)



Dimensions (in mm)

#### Connection Flanges

submerged sensor	process connection for 40mm, 54mm and 70mm
DN25	D = 115, k = 85, b = 16, n = 4, d2 = 14
DN40	D = 150, k = 110, b = 16, n = 4, d2 = 18
JIS16K40A	D = 140, k = 105, b = 16, n = 4, d2 = 19
JIS16K50A	D = 155, k = 120, b = 16, n = 4, d2 = 19
ANSI 1 1/2" 150 lbs	D = 127, k = 98,6, b = 19,2, n = 4, d2 = 15,7

#### Mounting Flanges with Cable Gland

DN50 (in steel and stainless steel)	D = 165, k = 125, b = 18, n = 4, d = 18
DN65 (in steel and stainless steel)	D = 185, k = 145, b = 18, n = 4, d = 18
DN80	D = 200, k = 160, b = 20, n = 8, d = 18
JIS5K65A (in steel and stainless steel)	D = 155, k = 130, b = 14, n = 4, d = 15
JIS10K100A	D = 210, k = 175, b = 18, n = 8, d = 19

cable gland M16x1.5 with  
seal insert (for cable Ø 4-11mm)

