

Level Sensor Series 940

The series 940 level sensors are designed for reliable operation in rough environments like shipbuilding and offshore industries. The sensors are used for electric level measurement in pneumatic tank level systems.

The tank levels are measured with high precision due to the capacitive ceramic sensor cell. 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 ₂ 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				
Connection													
connection size:	G1/4" A hose connection, d=4,5mm												
Output Signal / Supply													
standard	2-wire: 4 ... 20 mA / U _B = 9 ... 32 VDC / U _B rated = 24 VDC												
Performance													
accuracy*	≤ ± 0,2 % FSO												
permissible load	$R_{max} = [(U_B - U_{B \min}) / 0,02 \text{ A}] \Omega$												
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	< 120 ms / average measuring rate 8/s												
*accuracy according to repeatability)	IEC 60770 - limit point adjustment (non-linearity, hysteresis,												
Thermal Effects / Permissible Temperatures													
thermal error	≤ ± 0,02 x nominal range / set range / 10 K in compensated range 0 ... 80 °C												
permissible temperatures	medium: -40 ... 125 °C storage / electronics / environment: -40 ... 85 °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 and DNV GL												
Mechanical Stability													
vibration	4 g (basis: DIN EN 60068-2-6)												
Electrical Connection													
input communication connector	terminal clamps (3-pin) M12X1 (8-pin), metal												
Materials													
casing	hat rail casing - PA6 (not in contact with medium)												
seals (media wetted)	FKM												
diaphragm	ceramic Al ₂ O ₃ 96 %												
pressure port	stainless steel 1.4301 brass												



Miscellaneous

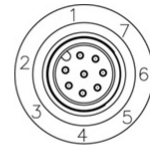
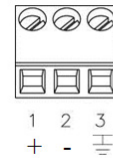
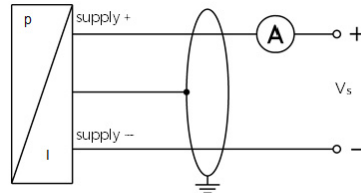
ingress protection	IP 00
current consumption	max. 21 mA
weight	min. 200 g
CE-conformity	EMC Directive: 2014/30/EU ATEX-Directive: 2014/34/EU

Environmental Category

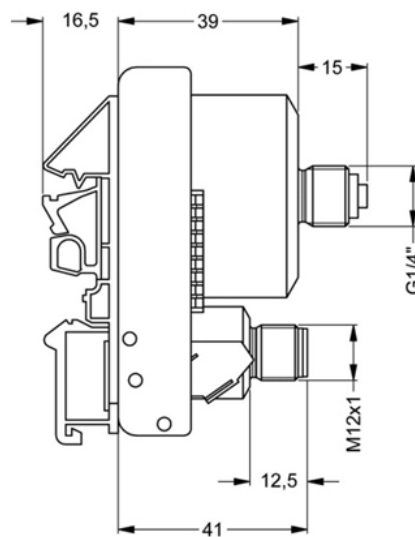
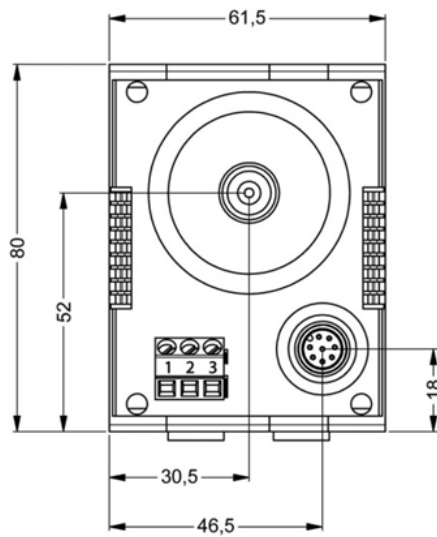
DNV GL

Connection

2-wire-system (current)



	terminal clamps	M12x1
supply +1	1	-
supply +2	-	4
supply -	2	2
Tx	-	5
Rx	-	6
GND	-	7
NC	-	1
shield	3	3



Dimensions (in mm)