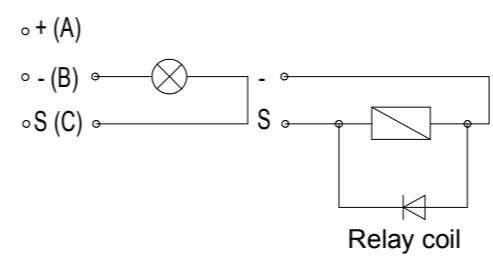
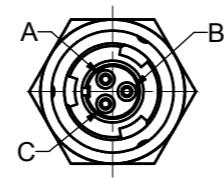
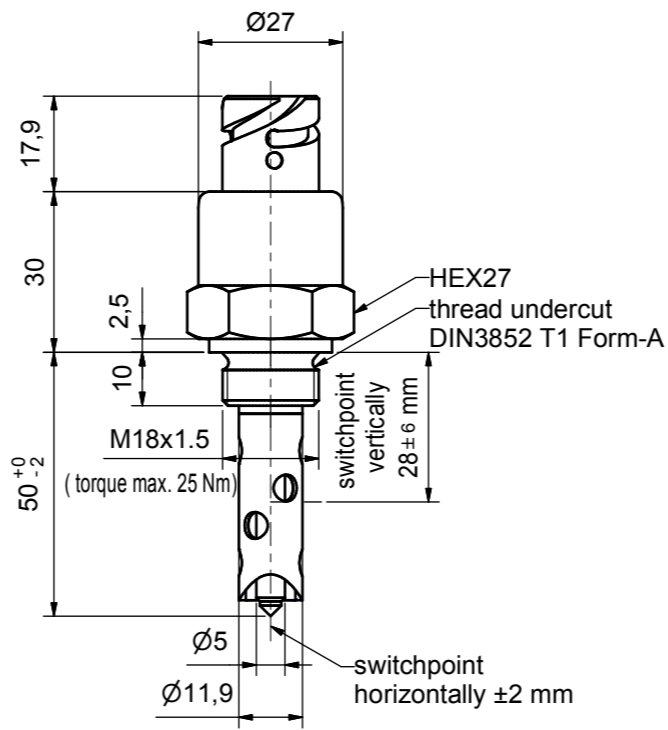


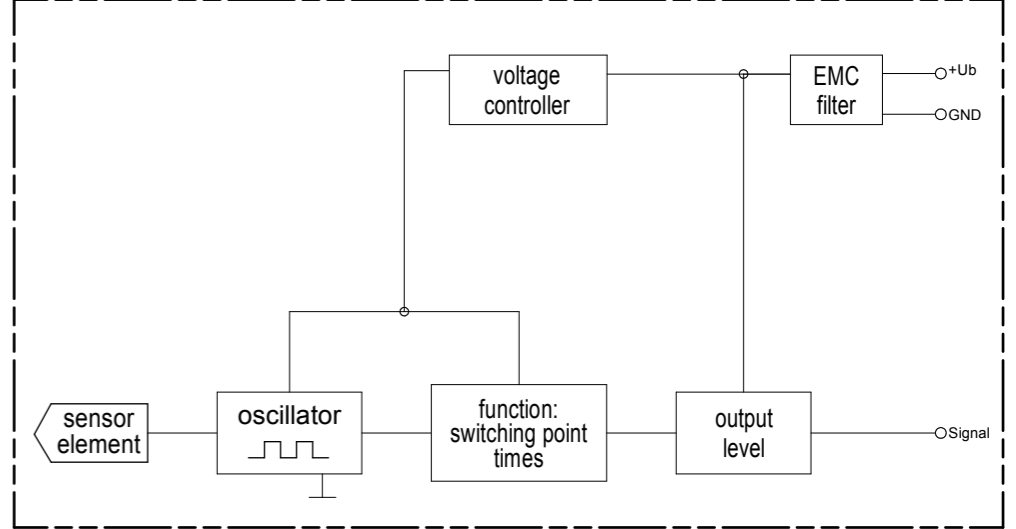
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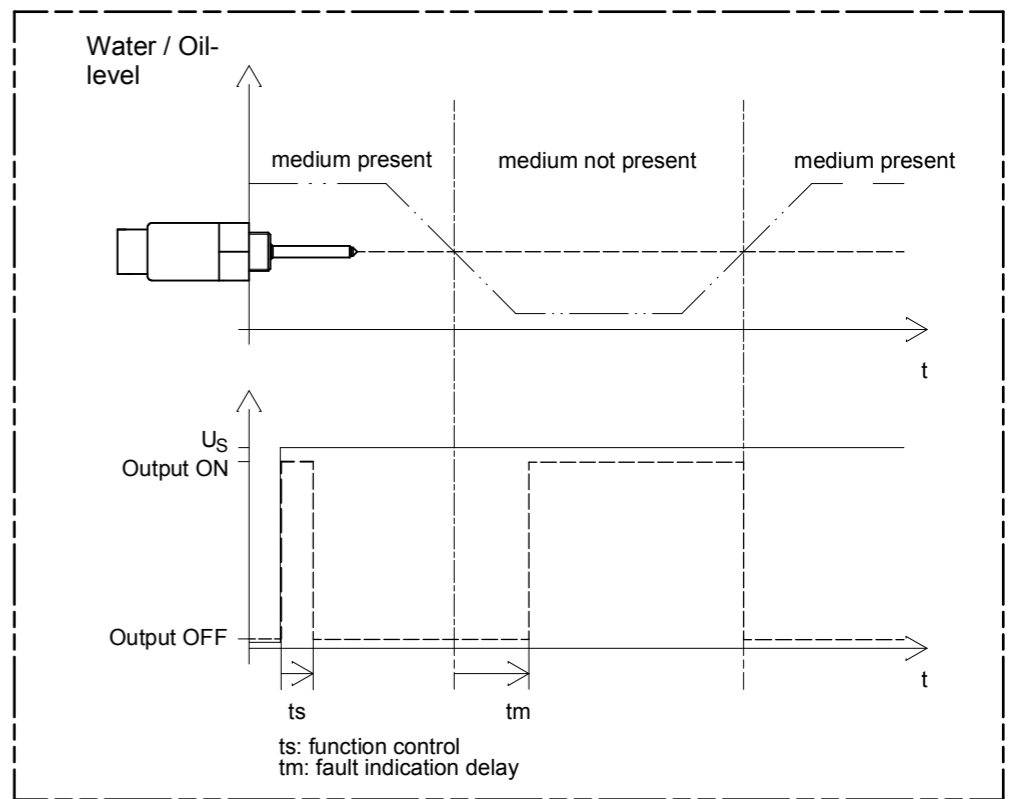
	11	10	9	8	7	6	5	4	3	2	1
Technical data											
Medium	oil										
Function	minimum - operating current (oc)										
Operating voltage	12 / 24 V (-25% / +50%) (9 - 36 VDC)										
Current consumption	typ. < 8 mA										
Output	high side switch ≤ 1 A over the whole temperature range short-circuit and overload protected over the ambient temperature range. At inductive loads freewheeling diode e.g. 1N4007, has to be mounted at the load.										
Mounting thread	M18x1.5										
Function control	2 seconds ± 5%										
Fault indication delay	7 seconds ± 5%										
Connection	connector bayonet 10SL										
Housing material	X5CrNi18 10 EN 10088-3:1.4301										
Probe coating	capacitive connected to ground Tefzel® ETFE										
Probe protection	IP 67 to DIN40050										
Weight	approx. 105 g										
Marking	manufacturer; type; manufacturer no.; customer-part-no.; SN; year / week; approvals										
Switch point hysteresis	typ. < 3 mm										
Reference medium	paraffin oil, $\epsilon_r = 2,0..2,4$, for switchpoint adjustment										
Medium temperature	-40 °C to +150 °C (-40 °F to +302 °F)										
Ambient temperature	-40 °C to +125 °C (-40 °F to +257 °F)										
Storage temperature	-50 °C to +125 °C (-58 °F to +257 °F)										
Mounting position	optional										
Reverse polarity protection	inbuilt between positive and negative terminal										
Caution !!	Do not connect positive potential to signal terminal of the sensor and negative potential to positive terminal of the sensor.										
Approvals	ABS, BV, CCS, DNV, GL, KR, LR, NKK, RINA, RMRS										
Customs tariff number	90261029										
Environmental simulations											
Vibration	ISO 16750-3:2007 10 Hz - 2000 Hz 20 g										
Free Fall	IEC 16750										
Mechanical Shock	DIN EN 60068-2-27:1995; 100 g / 11ms										
Dry Cold	DIN EN 60068-2-1:2006; -40 °C / 24 h (-40 °F / 24 h)										
Dry Heat	DIN EN 60068-2-2:2008; +125 °C / 96 h (+257 °F / 96 h)										
Temperature cycling	DIN EN 60068-2-14:2000										
Damp Heat	DIN EN 60068-2-78:2002										
Damp Heat, steady state	DIN EN 60068-2-30:2006										
Salt spray	DIN EN 60068-2-52:1996										
Flame retardant	DIN 75 200										
Pressure resistance	2,5 MPa (25 bar / 362,6 psi) (25°C / 77°F / 1 h)										
EMC											
Conducted emission from the power port	CISPR 16 10 kHz - 30 MHz										
Electric field radiated emissions	CISPR 16 150 kHz - 2 GHz										
RF electromagnetic fields	EN 61000-4-3 1 MHz - 2 GHz; 100 V / m										
Conducted interference	EN 61000-4-6 150 kHz - 80 MHz; 10 V										
Conducted interference	IEC 60533 50 Hz - 10 kHz; 3 V / 0,5 V										
ESD	EN 61000-4-2 ± 8 kV Contact / Air discharge										
Burst	EN 61000-4-4 ± 2 kV DC power port / signal lines										
Surge	EN 61000-4-5 ± 1 kV line <-> ground ± 0,5 kV line <-> line										
High voltage	IEC 60092-504 550 V										
Power supply variations and interruptions	EN 61000-4-11 Ub +50% / -25%										



Block diagram



Functional diagram for MINIMUM Probes



field of application	admissible tolerance	surface	scale 1:1	position -	amount -
	ISO2768-mK				
	date	name	description		
	created by 23.03.2010	Moderer	CLS-50 oil level sensor		
	checked by 23.03.2010	Saß	high side switch - operating current with connector bayonet 10SL		
			drawing number	sheet	
			500106	1/1	
rev.	modification	date	name/checked by	drawing path: I:\CAD\500106\US.idw	