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**Technical data**

Medium	oil
Function	minimum - operating current (oc)
Operating voltage	12 / 24 V (-25% / +50%) (9 - 36 VDC)
Current consumption	< 8 mA
Output	low 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 fine thread 5/8" UNEF
Housing material	X5CrNi18 10 EN 10088-3:1.4301 capacitive connected to ground
Probe coating	Tefzel® ETFE
Probe protection	IP 67 to DIN40050
Weight	approx. 105 g
Marking	manufacturer; type; manufacturer no.; customer-article no.; SN; year / week; approvals
Switch point hysteresis	typ. < 3 mm
Reference medium	paraffin oil, εr = 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 negative potential to signal terminal of the sensor and positive potential to negative terminal of the sensor.

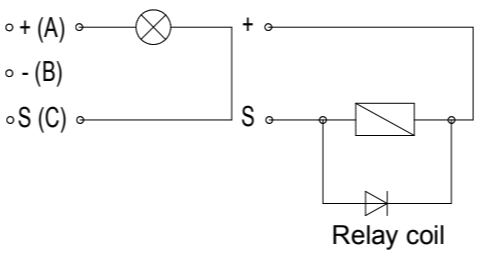
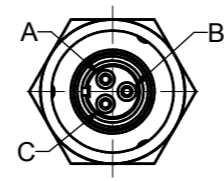
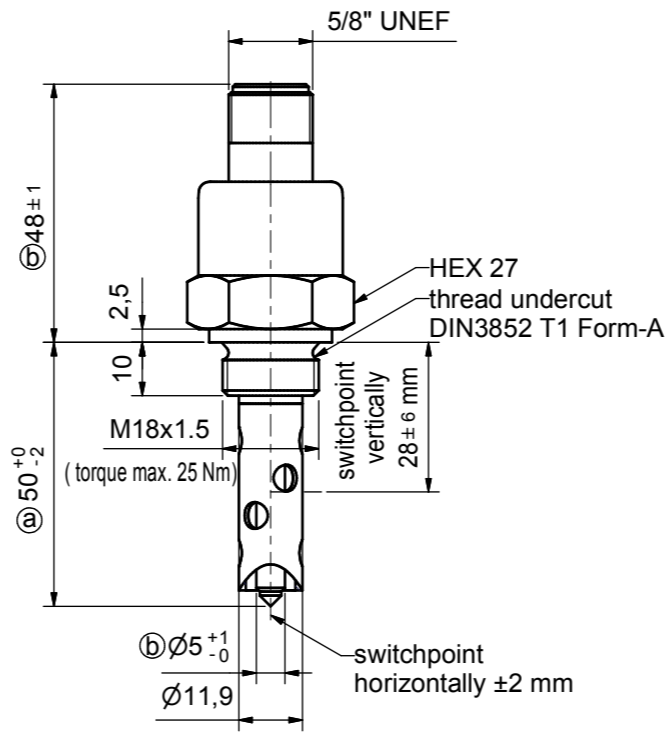
Approvals: ABS, BV, CCS, DNV, GL, KR, LR, NKK, RINA, RMRS  
Customs tariff number: 90261029

**Environmental simulations**

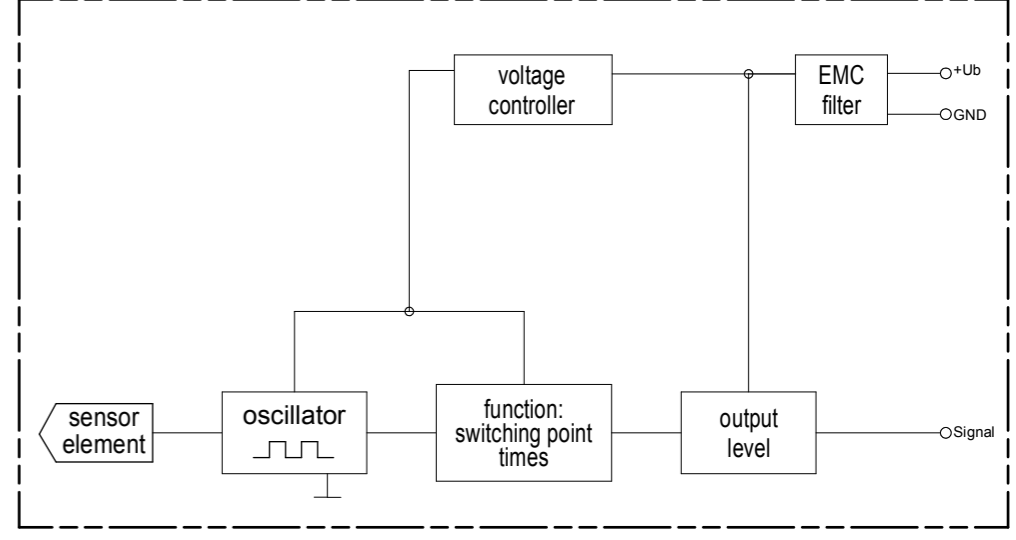
Vibration	ISO 16750-3:2007	10 Hz - 2000 Hz 20 g
Free Fall	IEC 16750	
Mechanical Shock	DIN EN 60068-2-27:1995;	100 g / 11ms
Dry Cold	DIN EN 60068-2-1:2006;	-40 °C / 24 h (-40 °F / 24 h)
Dry Heat	DIN EN 60068-2-2:2008;	+125 °C / 96 h (+257 °F / 96 h)
Temperature cycling	DIN EN 60068-2-14:2000	
Damp Heat	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**

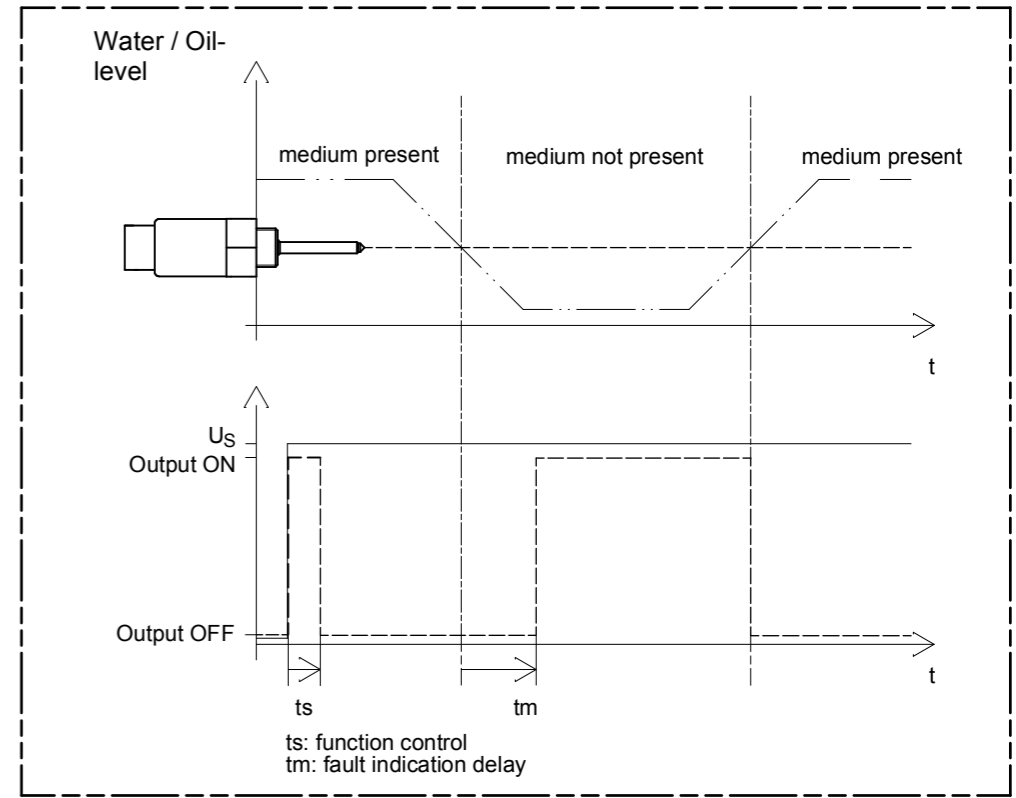
Conducted emission from the power port	CISPR 16	10 kHz - 30 MHz
Electric field radiated emissions	CISPR 16	150 kHz - 2 GHz
RF electromagnetic fields	EN 61000-4-3	1 MHz - 2 GHz; 100 V / m
Conducted interference	EN 61000-4-6	150 kHz - 80 MHz; 10 V
Conducted interference	IEC 60533	50 Hz - 10 kHz; 3 V / 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 05.08.2008	Schetnikova	CLS-50 oil level sensor			
checked by 07.08.2008	Stark	low side switch - operating current with connector fine thread 5/8" UNEF			
drawing number	sheet				
500058	1/1				
to: see drawing	18.08.10	Schet/Stark	drawing path: I:\CAD\500058\500058.dwg		
a: revised	02.02.10	Moderer/Stark			
rev. modification	date	name/checked by			