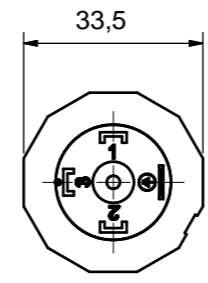
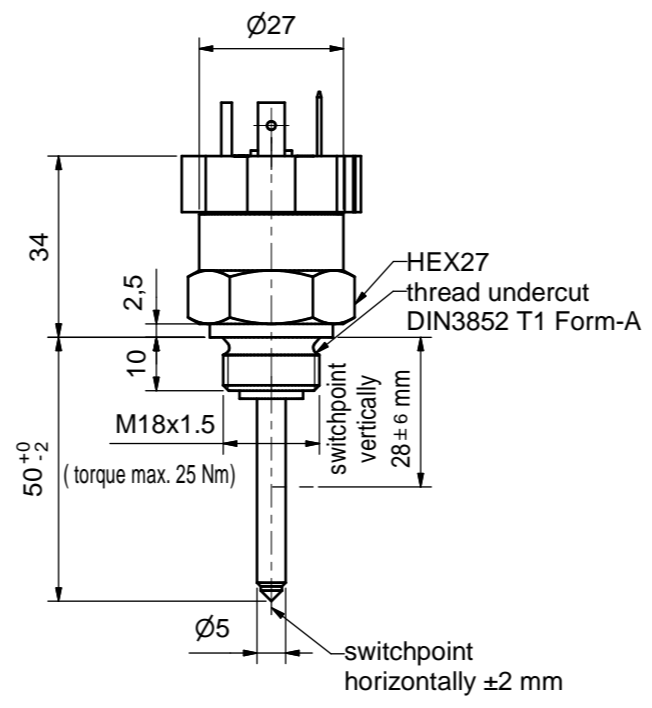


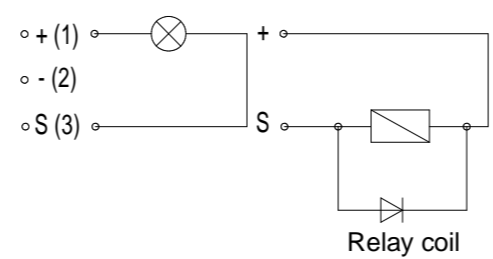
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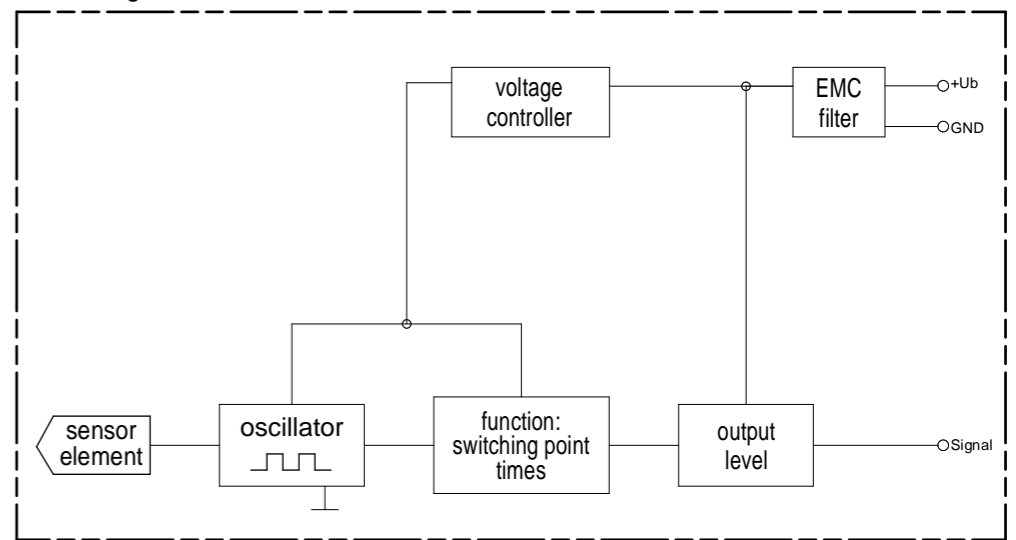
	11	10	9	8	7	6	5	4	3	2	1
Technical data											
Medium	water, coolant										
Function	Minimum - operating current (oc)										
Operating voltage	12 / 24 V (-25% / +50%) (9 - 36 VDC)										
Current consumption	typ. < 8 mA										
Output	low side switch										
	≤ 1 A over the whole temperature 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% ^(a)										
Connection	connector according to DIN EN 175 301-803-A										
Housing material	X5CrNi18 10 EN 10088-3:1.4301										
Probe coating	capacitive connected to ground Tefzel® ETFE										
Probe protection	IP 65 to DIN40050										
Weight	approx. 90 g										
Marking	manufacturer; type; manufacturer no.; SN; year / week; approvals										
Switch point hysteresis	typ. < 3 mm										
Medium temperature	-40 °C to +125 °C (-40 °F to +257 °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%									



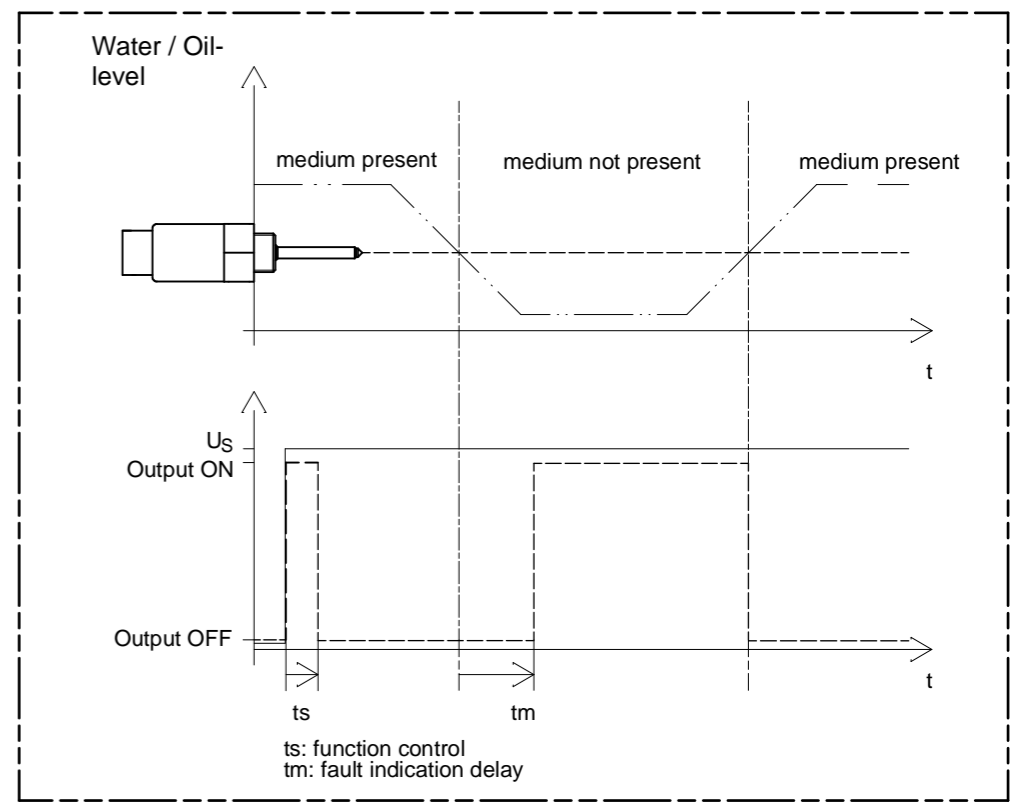
- 1 = positive (+)
- 2 = negative (-)
- 3 = signal (S)



Block diagram



Functional diagram for MINIMUM Probes



field of application	admissible tolerance	surface	scale 1:1	position -	amount -
	ISO2768-vK				
rev.	modification	date	name	description	
		31.05.10	Schet/Stark	CLS-50 water level sensor	
		02.03.2010	Möderer	low side switch - operating current	
		04.03.2010	Stark	with connector according to DIN EN 175 301-803-A	
a	DIN-No.	31.05.10	Schet/Stark	BEDIA®	500023
	rev.	modification	date	name	checked by