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BEDIA Motorentechnik GmbH & Co.KG, Altdorf bei Nürnberg

**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	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 bayonet 10SL
Housing material	X5CrNi18 10 EN 10088-3:1.4301
Probe coating	Tefzel® ETFE
Probe protection	IP 67 to DIN40050
Weight	approx. 105 g
Marking	manufacturer; type; manufacturer no.; SN; year / week; approvals
Switch point hysteresis	typ. < 3 mm
Reference medium	paraffin oil, ε <sub>r</sub> = 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.

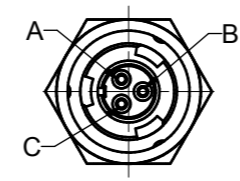
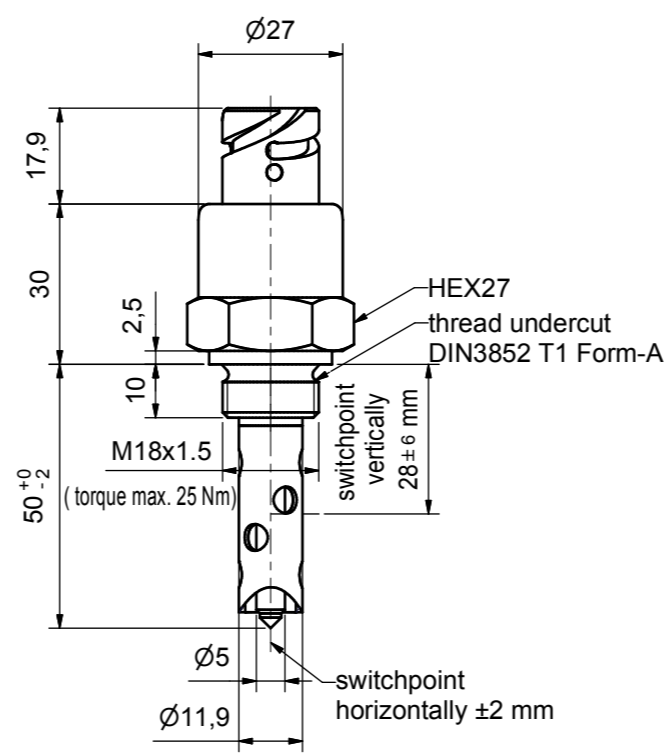
Approvals: ABS, BV, CCS, DNV, GL, KR, LR, NKK, RINA, RMRS  
 Customs tariff number: 90261029

**Environmental simulations**

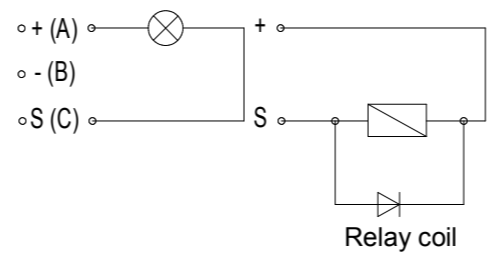
Vibration	ISO 16750-3:2007	10 Hz - 2000 Hz 20 g
Free Fall	IEC 16750	
Mechanical Shock	DIN EN 60068-2-27:1995;	100 g / 11ms
Dry Cold	DIN EN 60068-2-1:2006;	-40 °C / 24 h (-40 °F / 24 h)
Dry Heat	DIN EN 60068-2-2:2008;	+125 °C / 96 h (+257 °F / 96 h)
Temperature cycling	DIN EN 60068-2-14:2000	
Damp Heat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

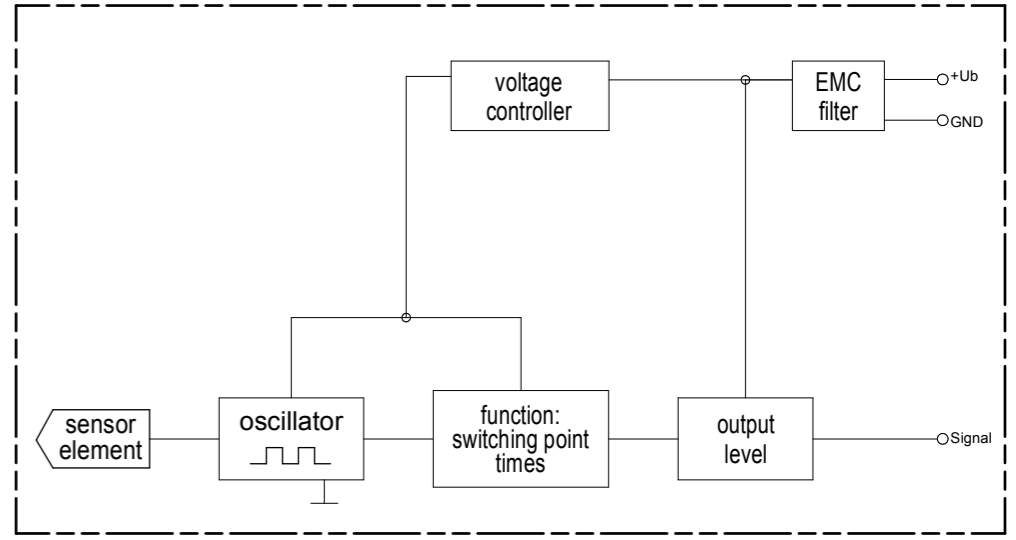
Conducted emission from the power port	CISPR 16	10 kHz - 30 MHz
Electric field radiated emissions	CISPR 16	150 kHz - 2 GHz
RF electromagnetic fields	EN 61000-4-3	1 MHz - 2 GHz; 100 V / m
Conducted interference	EN 61000-4-6	150 kHz - 80 MHz; 10 V
Conducted interference	IEC 60533	50 Hz - 10 kHz; 3 V / 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	U <sub>B</sub> +50% / -25%



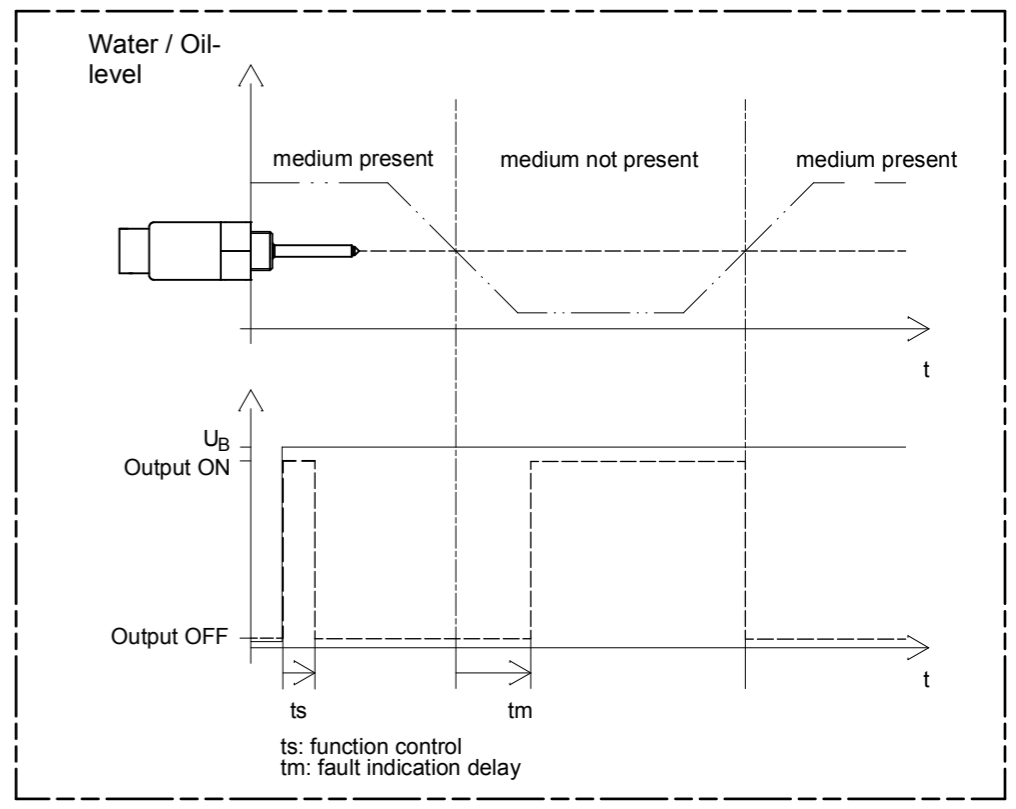
A = positive (+)  
 B = negative (-)  
 C = signal (S)



**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 18.02.2010	MoeMi	CLS-50 oil level sensor		
	checked by 22.02.2010	SasCh	low side switch - operating current with connector bayonet 10SL		
			drawing number	sheet	
			BEDIA® 500061	1/1	
rev.	modification	date	name/checked by	drawing path:	I:\CAD\500\500061\US.dwg