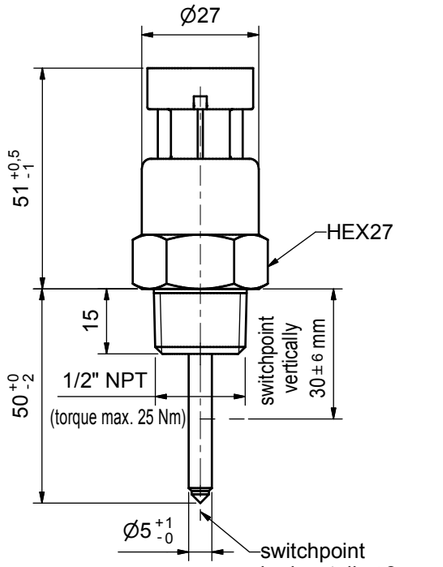
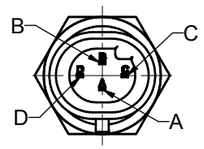
Technical data

Medium	water, coolant
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	1/2" NPT
Function control	2 seconds ± 5%
Fault indication delay	7 seconds ± 5%
Connection	connector Packard 4-pole
Housing material	CuZn38Pb2 EN12164; CW608N capacitive connected to ground
Probe coating	Tefzel® ETFE
Probe protection	IP 67 to DIN40050
Weight	approx. 100 g
Marking	manufacturer; type; manufacturer no.; SN; year / week; approval
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.

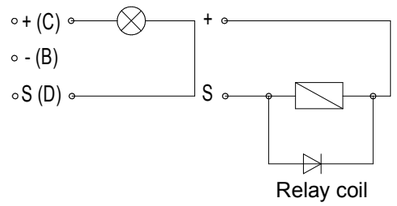
Approval	e1 035459
Customs tariff number	90261029



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

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	
Pressure resistance	2,5 MPa (25 bar / 362,6 psi) (25°C / 77°F / 1 h)	

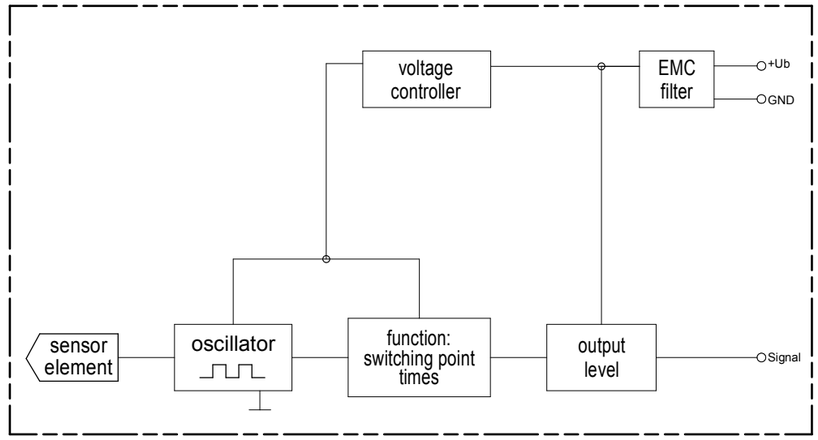


Relay coil

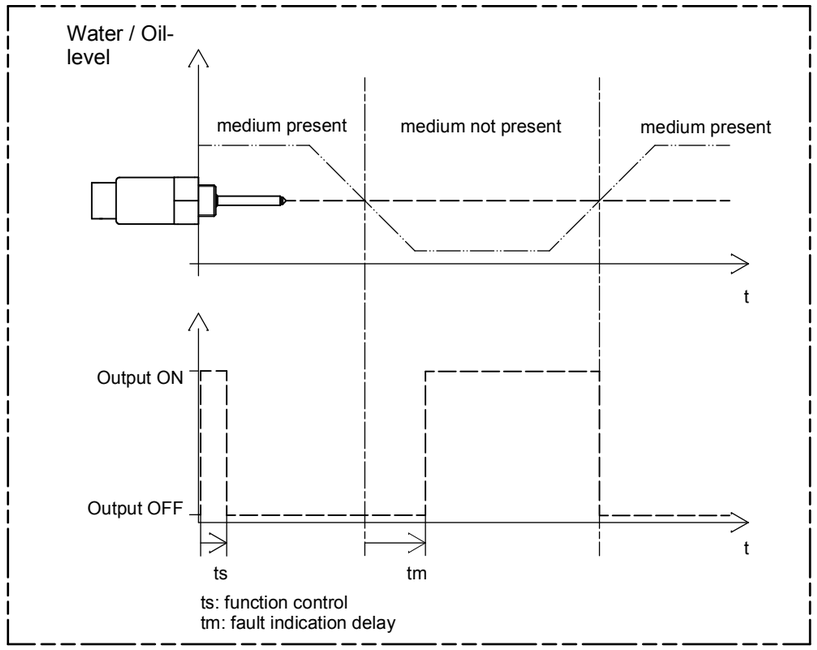
EMC

Radiated emission	2004/104/EG	30 MHz - 1 GHz; 1 m
Conducted transient emission	ISO 7637-2:2004	
Immunity to RF electromagnetic fields	ISO 11452-1/-2	1000 MHz - 2000 MHz; 150 V / m (rms)
Immunity to RF electromagnetic fields in the stripline	ISO 11452-1/-5	20 MHz - 1000 MHz; 150 V / m (rms)
Transient immunity test on power lines	ISO 7637-2/2004	Impulse 1, 2a, 2b, 3a, 3b, 4

Block diagram



Functional diagram for MINIMUM Probes



ts: function control
tm: fault indication delay

field of application		admissible tolerance	surface	scale 1:1	position – amount –
		ISO2768-mK			
			date / name	description	
		created by	26.01.2011 / MoeMi	CLS-40 water level sensor low side switch - operating current with connector Packard 4-pole	
		checked by	27.01.2011 / SasCh		
rev.	modification	date	name/checked by	drawing number 350208	sheet 1/1
				drawing path: I:\CAD\350\350208US.idw	