

Any non-compliance shall obligate the violator to compensate for damages. In case any patent is issued or a utility model is registered, or in case of any other industrial property rights, all such rights must be reserved for us.

BEDIA Motorentechnik GmbH & Co.KG, Altdorf bei Nürnberg

The copyright to this drawing belongs to us. No duplication or transfer to, providing access to or communicating to any third parties is allowed of its contents or excerpts thereof. This drawing may not be used without our approval for any purpose other than that for which it has been entrusted to the recipient.

**Technical data**

Medium: oil  
 Function: minimum - quiescent current (rc)  
 Operating voltage: 24 V (-62,5% / +50%) (9 - 36 VDC)  
 Current consumption: < 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: 0 seconds ± 5%  
 Fault indication delay: 7 seconds ± 5%  
 Connection: connector bayonet 16S  
 Housing material: CuZn38Pb2  
 EN12164; CW608N  
 capacitive connected to ground  
 Probe coating: Tefzel® ETFE  
 Probe protection: IP 67 to DIN40050  
 Weight: approx. 115 g  
 Marking: manufacturer; type; manufacturer no.; SN; year / week  
 typ. < 3 mm

Switch point hysteresis: paraffin oil,  $\epsilon_r = 2,0..2,4$ , for switchpoint adjustment  
 Reference medium: -40 °C to +150 °C (-40 °F to +302 °F)  
 Medium temperature: -40 °C to +125 °C (-40 °F to +257 °F)  
 Ambient temperature: -50 °C to +125 °C (-58 °F to +257 °F)  
 Storage temperature: optional  
 Mounting position: inbuilt between positive and negative terminal  
 Reverse polarity protection:

**Caution!!**

Do not connect positive potential to signal terminal of the sensor and negative potential to positive terminal of the sensor.

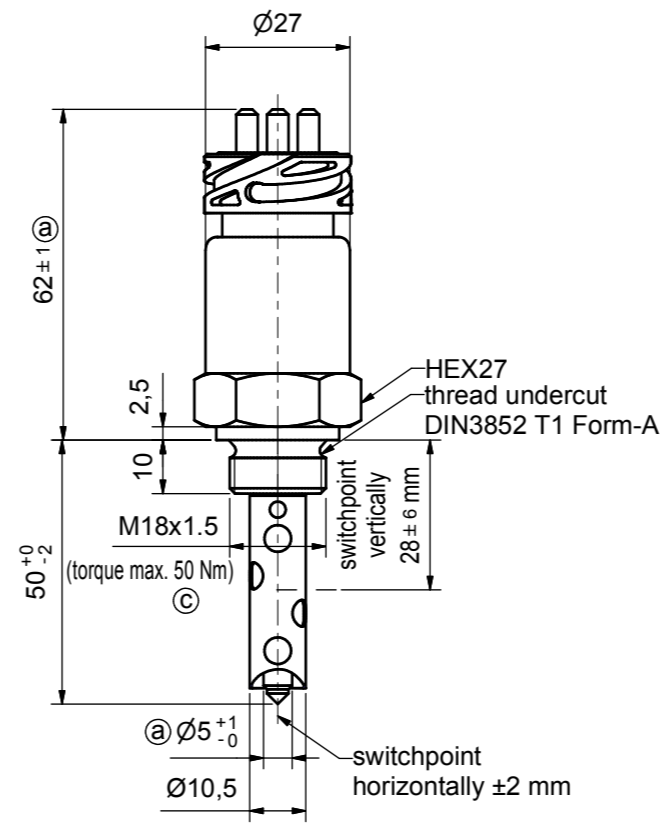
Customs tariff number: 90261029

**Environmental simulations**

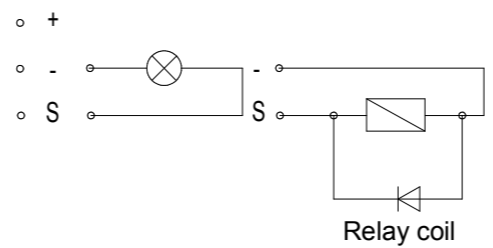
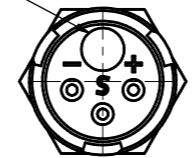
according to railway applications: DIN EN 50155  
 Simulated long life testing at increased random vibration levels: DIN EN 61373-clause 9  
 Shock testing conditions: DIN EN 61373-clause 10  
 Performance test with broad-band random: DIN EN 61373-clause 8  
 Storage at cold: DIN EN 60068-2-1  
 Dry heat: DIN EN 60068-2-2  
 Damp heat, cyclic: DIN EN 60068-2-30  
 Salt mist: DIN EN 60068-2-11  
 Flame test: flammability class S1 according to DIN 5510 part 2  
 Pressure resistance: 2,5 MPa (25 bar / 362,6 psi) (25°C / 77°F / 1 h)

**EMC according to railway applications**

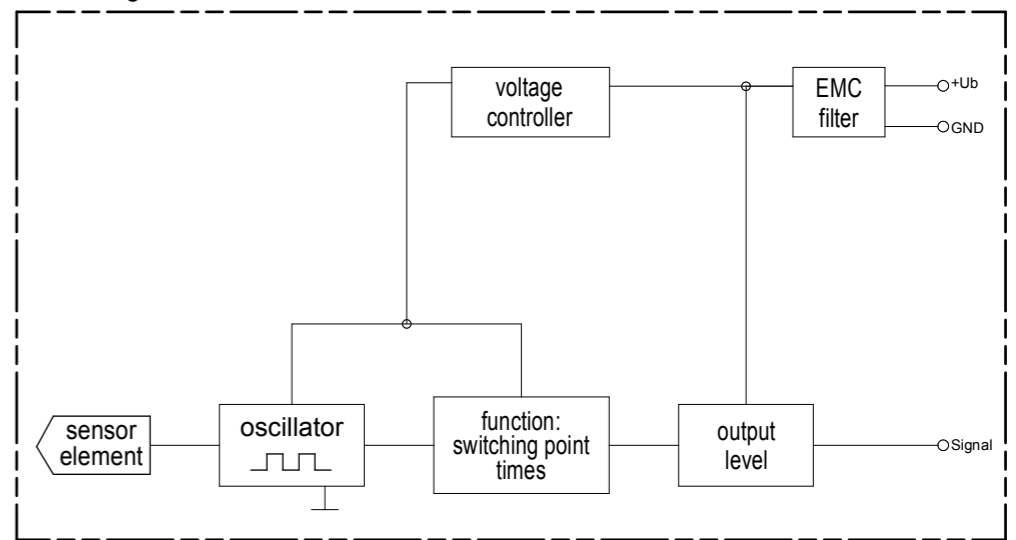
Conducted continuous disturbance at mains ports: EN 50121-3-2 class A+20  
 Conducted continuous disturbance at signal and data ports: EN 50121-3-2 class A+20  
 Radiated disturbance, electrical field: EN 50121-3-2 class A  
 Immunity radiated electromagnetic fields: IEC 61000-4-3 20 V/m  
 Conducted immunity, injected currents: EN 61000-4-6 10 V  
 EFT / Burst: EN 61000-4-4 2 kV  
 Electrostatic discharge test: EN 61000-4-2 6 kV / 8 kV  
 Surge immunity test: EN 61000-4-5 1 kV / 2 kV  
 Immunity to voltage dips, interruptions and fluctuations: EN 50155  
 Insulation test: DIN EN 50155 clause 12.2.9.1  
 Voltage withstand test: DIN EN 50155 clause 12.2.9.2



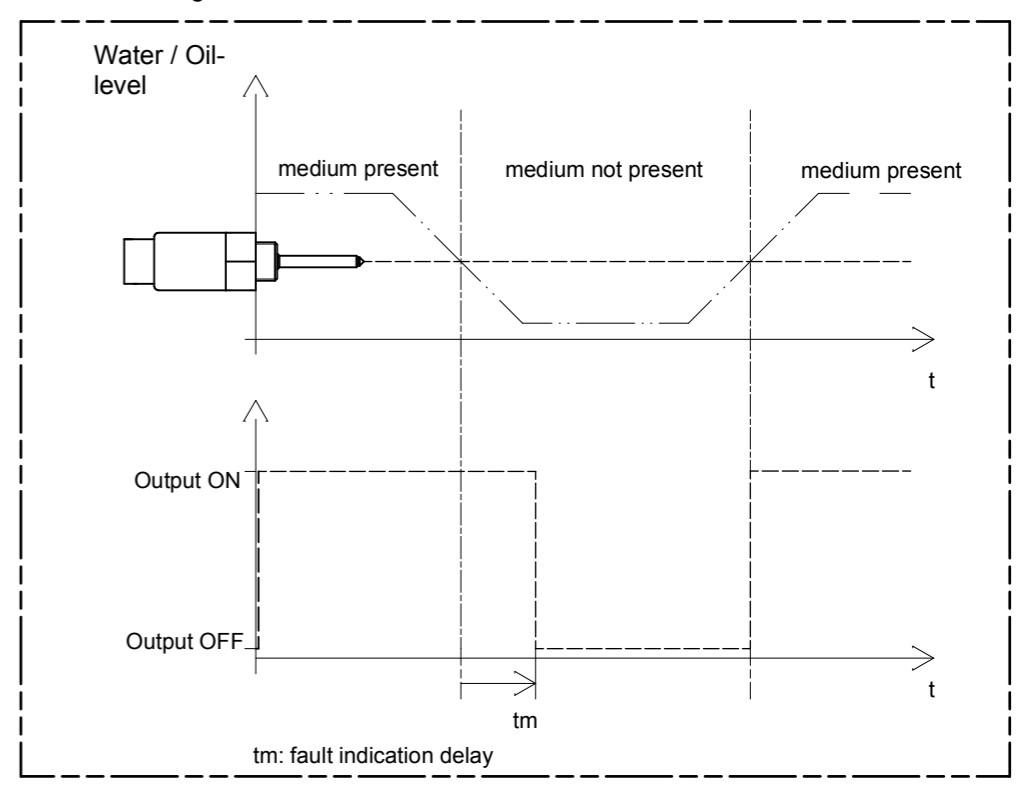
PVC - label yellow



**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 09.07.2010	MoeMi	CLS-20 oil level sensor high side switch - quiescent current with connector bayonet 16S		
	checked by 09.07.2010	SasCh			
c torque	01.12.10	MoeMi/SasCh	drawing number	sheet	
b state of the stand	01.10.10	MoeMi/SasCh	350527	1/1	
a revised	26.08.10	MoeMi/SasCh	drawing path: I:\CAD\350350527\US.idw		
rev. modification	date	name/checked by			