

» **BEDIA Level monitoring sensors**

with approvals of the classification societys

Typ PLCA 50 DC 12/24 V Typ PLCA 55 DC 5 V

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» General description

Level monitoring sensor with approvals

These sensors monitor the level of aqueous and oily liquids. They are used in:

» engines	» utility vehicles
» ships	» sets of machines

In engines these sensors monitor the level of:

» cooling water, oil level and fuel container

These sensors are used reliably for automatic filling and refilling of liquids, such as for supplying engine oil and fuel service tanks. In shipping, they are not only used to monitor engines but also to monitor supply tanks, wastewater tanks and bilges.

Wherever pressure switches or temperature probes are today used as level monitoring elements, this sensor offers the advantage of its indicating a critical condition far sooner:

Temperature probes frequently react too late, because the medium to be monitored is no longer present. The rise in temperature is not passed on to the pick-up sensor. Pressure switches do not indicate low oil until there is a total shortage of oil and thus too late to protect the engine. The level sensor issues a warning when there is still enough medium present.



Probe for aqueous liquids



Probe for oily liquids

BEDIA Level Monitoring Sensors differ from float-type switches through their compact design and their resistance to vibration:

Since they contain no mechanical moving parts, their functioning cannot be influenced either by soil particles or other influences. No current is sent into the medium via an electrode with BEDIA sensors, and so insulation of the probe and electrolysis in the system are not possible.

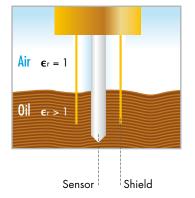
» Measurable mediums

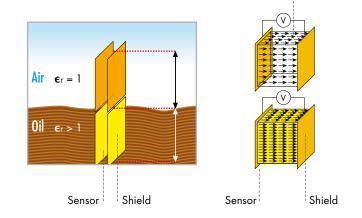
electrical field

How the sensor functions

The level sensor functions on the capacitive principle. It detects the change in capacitance that develops when an electrode surrounded by air is immersed in a liquid medium. This change in capacitance on the electrode of the sensor excites an oscillator, causing it to vibrate (at a frequency of approx. 600 kHz). This signal is then processed by digital evaluation electronics.

Capacitance measurement





Medium variants

The level sensors are designed for two different kinds of mediums:

- » For electrically conductive liquid mediums with relative permittivity within a range of ∈r: 35 ... 85 (water, coolant, water-glucose mixture)
- » And for electrically non-conductive liquid mediums with relative permittivity within a range of ∈r: 1.8 ... 6 (engine oil, fuels, hydraulic oil)

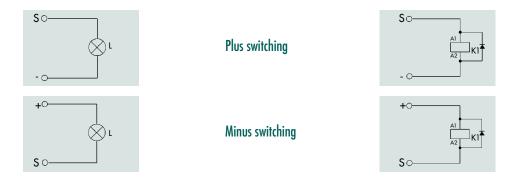
» Output

Circuitry output

The probes have a short-circuit-proof switch output:

Minus switching: Plus switching:

The output transistor switches minus potential to the load. The output transistor switches plus potential to the load.



With switching currents over 1 A, a relay has to be inserted. To do so, a free-wheeling diode has to be connected parallel to the relay as an overvoltage protective device with inductive loading (see technical specs).

Automatic operational check

The sensors have an approx. two-second operational check built in as standard. When the power supply is applied (such as ignition being switched on), this signal appears for approx. two seconds, thus signalling readiness to function. If this signal does not appear, the sensor should be checked. This self-monitoring makes it possible to check the level monitoring sensors from a central point for their readiness to function as well as for cable breakage. Especially in intricate, rambling systems, such as ships, checking conventional level switches is very difficult.

Further function control times are also available upon request.

Monitoring delay

To avoid indication errors when the surface of the liquid is fluctuating producing brief shortages and excesses in the level, the output signal comes as standard with the indication delayed by approx. seven seconds.

Further indication delay times are available upon request.

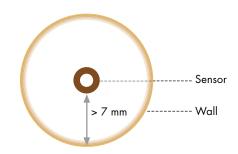
» Installation instruction

Mounting position

BEDIA Level Monitoring Probes may be installed in any attitude.

The level sensors have to be installed in a calmed zone so that the medium does not constantly moisten the level sensor by sloshing and splashing, which would cause error messages. This point is usually applicable for installation in gearboxes or for direct installation in engine oil pans during operation. In such cases, the correct level is only possible during standstills.

When carrying out the installation, be sure that the distance from the sensor probe to the wall is at least 7 mm.



Only for water-sensors

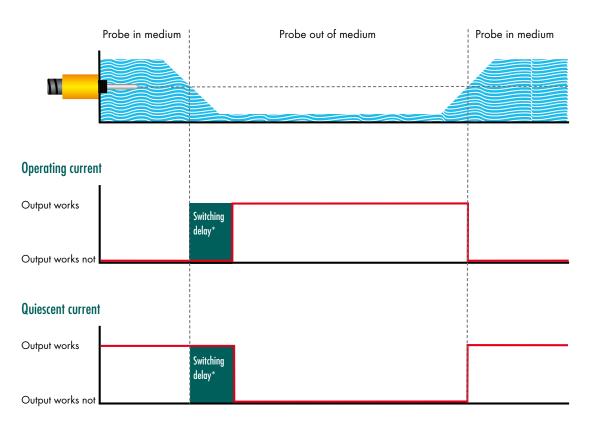
If the sensor is installed from above in a plastic container, error messages might come about under certain circumstances if the medium does not conduct any potential. When installed in all other positions, the casing will come into contact with the medium. This guarantees that potential will be present.

» Functionality overview Level probes minimum

Minimum probes

If a minimum probe is removed from the medium, its outlet becomes active after the report delay. If it is a working current probe, its outlet becomes low-impedance after the report delay and a signal is available at the outlet. If it is a quiescent current probe, its outlet becomes high-impedance after the report delay and there is no longer a signal available at the outlet.

If a minimum probe is immersed in the medium, its outlet immediately becomes passive. If it is a working current probe, its outlet becomes high-impedance after immersion and a signal is no longer available at the outlet. If it is a quiescent current probe, its outlet becomes low-impedance after immersion and there is a signal available at the outlet



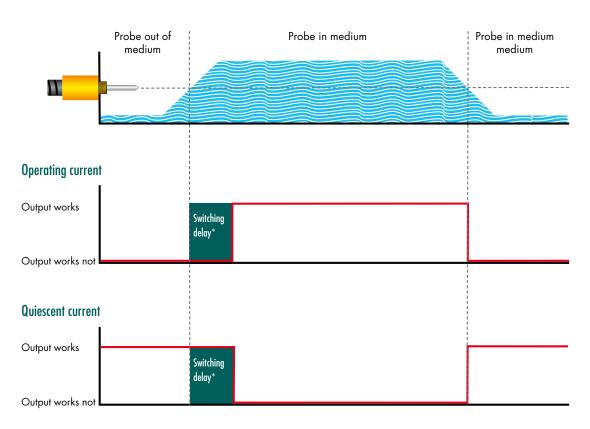
* If an immediately output switching is needed, it is possible to select a switching delay of 0 sec.

» Functionality overview Level probes maximum

Maximum probes

If a maximum probe is immersed in the medium, its outlet becomes active after the report delay. If it is a working current probe, its outlet becomes low-impedance after the report delay and a signal is available at the outlet. If it is a quiescent current probe, its outlet becomes high-impedance after the report delay and there is no longer a signal available at the outlet.

If a maximum probe is removed from the medium, its outlet immediately becomes passive. If it is a working current probe, its outlet becomes high-impedance after the removal and there is no longer a signal available at the outlet. If it is a quiescent current probe, its outlet becomes low-impedance after removal and a signal is available at the outlet.



* If an immediately output switching is needed, it is possible to select a switching delay of 0 sec.

sensor with connector bayonet DIN 72585 Degree of protection IP 69K to DIN 40050

CE-marking to EC-directive 89/336/EWG (EMC-directive), with approvals of the classification societys

				Signal output •	- potential	Signal output +	- potential
Thread	Monitoring display	Integral control function	Monitoring delay	Aqueous Liquids RefNo.	Oil and fuel RefNo.	Aqueous Liquids RefNo.	Oil and fuel RefNo.
Level se	nsors ou	tput OC,	operatin	g current			
M 18 x 1,5	MIN	2 sec	7 sec	50 310 211 21	50 320 211 21	50 310 221 21	-
M 18 x 1,5	MIN	2 sec	20 sec	50 310 212 21	50 320 211 24	-	_
M 18 x 1,5	MAX	2 sec	7 sec	_	50 320 212 21	50 310 222 21	50 320 222 21
M 18 x 1,5	MAX	0 sec	7 sec	50 310 212 11	50 320 212 11	_	50 320 222 11
M 18 x 1,5	MAX	0 sec	3 sec	_	_	_	50 320 222 13
M 18 x 1,5	MIN	0 sec	7 sec	_	-	50 310 221 11	50 320 221 11
M 14 x 1,5	MIN	l sec	20 sec	50 310 711 34	_	_	_
M 14 x 1,5	MIN	0 sec	7 sec	_	_	_	50 320 721 11
M 18 x 1,5	MAX	0 sec	0 sec	-	50 320 212 18	-	-
Level se	nsors ou	tput QC,	quiescen	t current			
M 18 x 1,5	MIN	2 sec	7 sec	_	50 320 213 21	_	_
M 18 x 1,5	MIN	0 sec	7 sec	-	-	50 102 223 21	-
M 18 x 1,5	MAX	0 sec	7 sec	-	-	-	50 320 224 11
M 18 x 1,5	MAX	2 sec	7 sec	50 310 214 21	50 320 214 21	-	-
M 18 x 1,5	MIN	0 sec	20 sec	-	_	_	50 320 223 14











Accessor	ies for approved probes
RefNo.	Description
Connector	
420 702	90° connector for cable
420 703	Straight connector for cable
Cable with a	onnector and the second se
420 800	Cable with connector 420 703 2000 mm
420 801	Cable with connector 420 703 5000 mm
420 802	Cable with connector 420 702 2000 mm
420 803	Cable with connector 420 702 5000 mm
Approved co	ble
421 646	3 x 1,5 mm ² cable, approved, available in meters
Brazed adap	ter
421 648	Brazed adapter, internal thread M 18 x 1,5









» Level probes type PLCA 50 with cable Degree of protection IP 68 up to 30 m depth in liquids to DIN 40050 and IP69K to DIN 40052

CE-marking to EC-directive 89/336/EWG (EMC-directive), with approvals of the classification societys

				Signal output •	- potential	Signal output +	- potential
Thread	Monitoring display	Integral control function	Monitoring delay	Aqueous Liquids RefNo.	Oil and fuel RefNo.	Aqueous Liquids RefNo.	Oil and fuel RefNo.
Level se	Level sensors output OC, operating current						
M 18 x 1,5	MIN	0 sec	7 sec	-	50 520 211 11	_	50 520 221 11
M 18 x 1,5	MIN	0 sec	7 sec	-	-	50 610 221 11	50 620 221 11
M 18 x 1,5	MIN	0 sec	2 sec	-	50 520 211 17	-	-
M 18 x 1,5	MIN	2 sec	7 sec	50 510 211 21	50 520 211 21	-	50 520 221 21
M 18 x 1,5	MAX	0 sec	7 sec	50 510 212 11	-	50 510 222 11	50 520 222 11
M 18 x 1,5	MAX	0 sec	7 sec	-	-	-	50 620 222 11
M 18 x 1,5	MAX	2 sec	7 sec	-	-	50 510 222 21	-
G 1/2"	MIN	2 sec	7 sec	-	-	50 521 321 21	-
Level se	ensors ou	tput QC,	, quiescent	current			
M 18 x 1,5	MAX	0 sec	0 sec	50 510 214 18	50 520 214 18	_	_
M 18 x 1,5	MIN	0 sec	7 sec	-	-	50 510 223 11	50 520 223 11
M 18 x 1,5	MIN	0 sec	7 sec	_	_	_	50 620 223 11
M 18 x 1,5	MAX	0 sec	7 sec	-	-	50 510 224 11	50 520 224 11
M 18 x 1,5	MAX	0 sec	7 sec	_	-	-	50 620 224 11
M 18 x 1,5	MAX	2 sec	7 sec	-	50 520 214 21	-	-
M 18 x 1,5	MIN	0 sec	20 sec	-	-	-	50 520 223 14

Accessories for approved probes					
RefNo.	Description				
418 050	Cable EPD 80297A-3x44A0111-20 approved, available in meters				
421 648	Brazed adapter, internal thread M 18 x 1,5				









sensor with connector bayonet 10 SL according VG 0095342 Degree of protection IP 67 to DIN 40050



CE-marking to EC-directive 89/336/EWG (EMC-directive), with approvals of the classification societys

				Signal output •	- potential	Signal output +	- potential
Thread	Monitoring display	Integral control function	Monitoring delay	Aqueous Liquids RefNo.	Oil and fuel RefNo.	Aqueous Liquids RefNo.	Oil and fuel RefNo.
Level se	ensors ou	tput OC,	, operatin	g current			
M 18 x 1,5	MAX	2 sec	7 sec	50 110 212 21	50 120 212 21	_	_
M 18 x 1,5	MIN	0 sec	7 sec	-	-	_	50 120 221 11
M 18 x 1,5	MIN	2 sec	7 sec	50 110 211 21	50 120 211 21	50 110 221 21	50 120 221 21
M 18 x 1,5	MAX	0 sec	7 sec	50 110 212 11	50 120 212 11	50 110 222 11	50 120 222 11
M 18 x 1,5	MIN	0 sec	20 sec	_	-	-	50 120 221 14
M 18 x 1,5	MAX	0 sec	20 sec	-	-	-	50 120 222 14
M 18 x 1,5	MAX	0 sec	0 sec	_	-	-	50 120 222 18
G 1/2"	MIN	2 sec	7 sec	-	-	-	50 120 321 21
G 1/2"	MAX	2 sec	7 sec	-	-	-	50 120 322 21
Level se	ensors ou	tput QC,	, quiescent	t current			
M 18 x 1,5	MIN	0 sec	7 sec	-	_	50 110 223 11	50 120 223 11
M 18 x 1,5	MIN	0 sec	20 sec	-	50 120 213 14	-	50 120 223 14

Accessories for approved probes

2 sec

7 sec

MIN

RefNo.	Description	
Connector		
421 652	Straight connector, thread, 10 SL	
421 885	90° connector, thread, 10 SL	
Cable		
421 653	Cable with connector 421 652	2000 mm
421 657	Cable with connector 421 652	5000 mm
421 646	3 x 1,5 mm ² cable, approved, available	e in meters
Brazed ada	oter	
421 648	Brazed adapter, internal thread M 18 x	: 1,5





M 18 x 1,5







50 110 223 21 50 120 223 21

with connector thread 5/8-24 NEF-2A according VG 0095342 Degree of protection IP 67 to DIN 40050

CE-marking to EC-directive 89/336/EWG (EMC-directive), with approvals of the classification societys

				Signal output •	- potential	Signal output +	- potential
Thread	Monitoring display	Integral control function	Monitoring delay	Aqueous Liquids RefNo.	Oil and fuel RefNo.	Aqueous Liquids RefNo.	Oil and fuel RefNo.
Level se	ensors ou	tput OC,	operating	g current			
M 18 x 1,5	MIN	2 sec	7 sec	50 210 211 21	50 220 211 21	50 210 221 21	50 220 221 21
M 18 x 1,5	MAX	0 sec	7 sec	50 210 212 11	50 220 212 11	-	50 220 222 11
M 18 x 1,5	MAX	2 sec	7 sec	_	50 220 212 21	50 210 222 21	-
M 18 x 1,5	MAX	0 sec	7 sec	-	-	-	50 220 222 11
Level se	ensors ou	tput QC,	quiescent	t current			
M 18 x 1,5	MIN	0 sec	7 sec	50 210 213 11	50 220 213 11	_	_







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Accesso	ries for approved probe	S		
RefNo.	Description			
Connector				
421 645	Straight connector, thread, 10 SL			
421 649	90° connector, thread, 10 SL			
Cable with	connector			
421 647	Cable with connector 421 645	2000 mm		
421 776	Cable with connector 421 645	3000 mm		
421 654	Cable with connector 421 645	5000 mm		
421 666	Cable with connector 421 645	6000 mm		
421 655	Cable with connector 421 649	2000 mm		
421 656	Cable with connector 421 649	5000 mm		
Approved o	able			
421 646	3 x 1,5 mm ² cable, approved, availe	ıble in meters		
Brazed ada	pter			
421 648	Brazed adapter, internal thread M 18	3 x 1,5		









with connector for bayonet DIN 43650 Degree of protection IP 65 to DIN 40050

CE-marking to EC-directive 89/336/EWG (EMC-directive), with approvals of the classification societys

				Signal output •	- potential	Signal output +	potential
Thread	Monitoring display	Integral control function	Monitoring delay	Aqueous Liquids RefNo.	Oil and fuel RefNo.	Aqueous Liquids RefNo.	Oil and fuel RefNo.
Level se	nsors ou	tput OC,	, operatin	g current			
M 18 x 1,5	MAX	0 sec	0 sec	_	-	-	50 420 222 18
M 18 x 1,5	MIN	2 sec	7 sec	50 410 211 21	50 420 211 21	50 410 221 21	50 420 221 21
M 18 x 1,5	MAX	2 sec	7 sec	_	50 420 212 21	50 410 222 21	50 420 222 21
M 18 x 1,5	MIN	0 sec	7 sec	-	-	50 410 221 11	50 420 221 11
M 18 x 1,5	MAX	0 sec	7 sec	50 410 212 11	50 420 212 11	_	-
1/2″ NPTF	MIN	2 sec	7 sec	50 410 511 21	50 420 511 21	50 410 521 21	50 420 521 21
1/2" NPTF	MAX	2 sec	7 sec	50 410 512 21	_	_	_
G 1/2"	MAX	2 sec	0 sec	_	-	-	50 420 322 28
G 1/2"	MIN	2 sec	2 sec	_	-	-	50 420 321 27
G 1/2"	MAX	2 sec	2 sec	-	-	-	50 420 322 27
G 1/2"	MIN	2 sec	7 sec	50 410 311 21	-	50 410 321 21	50 420 321 21
G 3/8"	MAX	2 sec	7 sec	-	-	-	50 420 422 21
Level se	nsors ou	tput QC,	, quiescent	t current			
M 18 x 1,5	MAX	O sec	0 sec	_	50 420 214 18	_	_
M 18 x 1,5	MAX	0 sec	7 sec	-	-	50 410 224 11	50 420 224 11
M 18 x 1,5	MIN	0 sec	7 sec	50 410 213 11	50 420 213 11	50 410 223 11	-
M 18 x 1,5	MAX	2 sec	7 sec	-	-	50 410 224 21	50 420 224 21
G 1/2"	MIN	2 sec	2 sec	50 410 313 27	-	-	-
G 1/2"	MIN	0 sec	7 sec	-	-	-	50 420 323 11
G 1/2"	MIN	2 sec	7 sec	_	-	50 410 323 21	-
G 1/2"	MAX	0 sec	7 sec	_	-	-	50 420 324 11

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Accessor	ies for approved probes	
RefNo.	Description	
Connector		
421 880	Connector to DIN 43 650-A	
Cable with	connector	
421 875	Cable with connector 421 880 to DIN 43 650-A	2000 mm
421 876	Cable with connector 421 880 to DIN 43 650-A	5000 mm
Approved c	able	
421 646	3 x 1,5 mm ² cable, approved, available in meters	
Brazed ada	pter	
421 648	Brazed adapter, internal thread M 18 x 1,5	











» Technical data

for Level probes type PLCA 50 at $T_{u} = 25 \ ^{\circ}C$

Voltage rating: Current consumption: Signal output switching capacity:
Switch point vertically mounted:
Switch point horizontally mounted:
Switch point hysteresis:
Medium temperature:

Ambient temperature: Storage temperature: Fault indication delay/Function test: Reverse polarity protection: DC 12/24 V (-25 %/+30 %) typ. 8 mA 12 W/12 V; 24 W/24 V short-circuit and overload protected over the ambient temperature range 18 mm ± 6 mm 2,5 mm ± 1 mm typ. < 3 mm -30 °C to +125 °C -30 °C to +125 °C -50 °C to +125 °C see ordering information in-built, between plus and minus terminal

Caution!

With low-side switching sensors do not connect minus potential to signal terminal and plus potential to minus terminal. With high-side switching sensors do not connect plus potential to signal terminal and minus potential to plus terminal. Inductive loads: A free wheeling diode, e.g. 1N4007, has to be mounted at the load

Voltage drop:	< 300 mV/1 A					
Overvoltage protection:	Limits the voltage to approx. 40 V. (suppression diode)					
Vibration:	IEC 68-2-6 2–25 Hz 1,6 mm Amplitude; 25–100 Hz 4 g					
Pressure resistance:	25 x 10⁵ Pa (25 bar = 367,5 PSI)					
Degree of protection:	see following pages					
Mounting attitude:	optional					
Housing:	capacitively connected to ground					
Material:	brass – CuZn38Pb1,5 galvanic nickeled,					
	probe coating: Tefzel® ETFE					
Mass:	approx. 180 g					
Cable connection/Mounting thread:	see ordering information					
Marking:	laser					
Connection turning moment:	max. 50 Nm					
EMC						
Electrostatic discharge:	IEC 1000-4-2 8 kV air discharge, 6 kV contact discharge					
Radiated Electro-magnetic fields:	IEC 1000-4-3 10 V/m; 27 MHz to 1000 MHz, 80% AM (1 kHz)					
Burst:	IEC 1000-4-4 2 kV power supply, 1 kV signal output					
Surge:	IEC 1000-4-5 1 kV diff. mode: power supply, 2 kV common mode:					
	power supply, 2 kV common mode: signal output					
Conducted high frequency:	IEC 1000-4-6 3 V, 10 kHz to 80 MHz, 80% AM (1 kHz)					
Conducted low frequency:	IEC 945 3 V rms, 50 kHz to 10 kHz					

» Ordering key for Level probes type PLCA 50 PLCA 50 Point Level Control Approval

50	PLCA	4-50 Po	int Leve	Тур					
	DC	12 V/24	4 V (-2	Voltage rating					
	1	Baya	Bayonet 10 SL to VG 0095342						
	2	Three	ad 5/8	- 24NE	EF -2A to	o VG 0	09534	2	
	3	Baya	Bayonet to DIN 72585 - A1-3.1-Sn / K1						
	4	Coni	nector t	o DIN 4	43650				
	5	Cab	e 5 m :	stando	ard				
	6	Cab	e 10 m	1					Connection type
	7	-	er conr						
	8			connect	or 5 m	cable			
	9		e7m						
	10				8,5 m co				
	11	Bajo	nett 12	Sl nacl	n VG 00	095342	2		
		1				ds of sir	nilar vi	scosity's	Medium
		2		il and f					
			01		5 x 1,5				
			02	-	8 x 1,5				
			03	G 1/		T I I.			
			04	G 3/					Thread sizes
			05		NPTF				
			06		' NPTF				
			07		4 x 1,5				
				1		us switc	-		Signal output
				2		switchir	-		
					1			perating current	
					2			operating current	Function
					3			o-load current	
					4			no-load current	
						1	0 se		From attending of a set
						2	-	c standard	Functional test
						3	l se		
							1	7 sec standard	
							2	15 sec	
bu							3	3 sec	Docnonce delau
rati	Vpe			_		st	4	20 sec	Response delay
Typ/Voltage rating	Connection type		zes	Signal output		al te	5	17 sec	
/oltc	ectic	E	Thread sizes	00	on	ionc	6	3600 sec	
\d) UU	Medium	Irea	gna	Function	Functional test	7 8	2 sec O sec	
L L	U U	×	⊨ –	S	<u>ک</u>	Ľ			
							Kespo	nse delay	
50									
								1	





CE-marking to EC-directive 89/336/EWG (EMC-directive), with approvals of the classification societys

Technical desription

The Level sensor PLCA 55 is working with 5 V DC supply voltage.

They operate in the principle of electrical capacitance changes arising when an eletrode sirrounded by air is immersed in a liquid medium. This capacitance change causes the electrical circuit at th sensor electode to oscillate (approx. 600kHz); the resultant signal is processed in the digital control unit.

To order a sensor please use the ordering key on page 22.

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» Technical data for Level probes type PLCA 55 at T_u = 25 °C

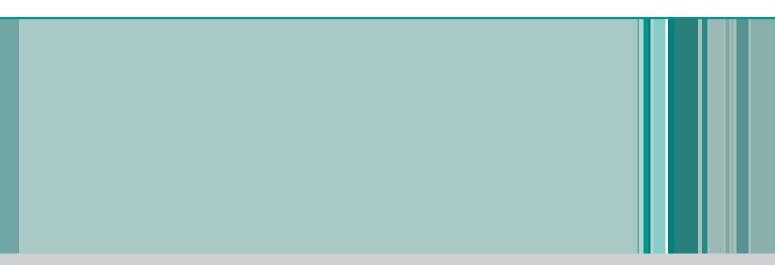
Voltage rating: DC 5 V (± 0,25 V) Current consumption: typ. 8 mA Signal output: voltage At -30 °C ... 125 °C: 0,5 V und 4,5 V Wire break detection: 0,4 V ... 0,6 V und 4,4 V ... 4,6 V at 10 mA GND: > 4,84 V **SIGNAL:** < 0,20 V U_R. < 0.20 V **Output currend:** < 10 mA short-circuit and overload protected over the ambient temperature range Switch point vertically mounted: 18 mm ± 6 mm Switch point horizontally mounted: 2,5 mm ± 1 mm Switch point hysteresis: typ. < 3 mmMedium temperature: -30 °C to +125 °C Ambient temperature: -30 °C to +125 °C Storage temperature: -50 °C to +125 °C Fault indication delay, Function test, Function: see ordering information Reverse polarity protection: in-built between plus and minus terminal Vibration: 2-25 Hz 1,6 mm Amplitude; 25-100 Hz 4 g IEC 68-2-6 Preassure resistance: 25 x 10⁵ Pa (25 bar = 367,5 PSI) Degree of protection: DIN 40050 Mounting attitude: optional Housing: capacitively connected to ground Material: Messing – CuZn38Pb1,5 galvanic nickel plated Probe coting: Tefzel® ETFE Weight: approx. 180 g Mounting thread: see ordering information Marking: laser **Connection turning moment:** max. 50 Nm EMC Electrostatic discharge: IEC 1000-4-2 8 kV air discharge, 8 kV contact discharge Radiated electo-magnetic fields: IEC 1000-4-3 10 V/m; 80 MHz to 2000 MHz, 80% AM (1 kHz) Burst: IEC 1000-4-4 2 kV capacitive coupling Conducted high frequency: IEC 1000-4-6 3 V, 9 kHz to 240 MHz, 80% AM (1 kHz) Conducted emossions: **CISPER 16-1,2** 10 kHz ... 150 kHz, 64 dB ... 44 dB (V/m); 150 kHz ... 350 kHz, 65 dB ... 44 dB (V/m); 350 kHz ... 30 MHz, 65 dB (V/m) Radiated emissions from enclosure port: **CISPER 16-1,2** 150 kHz ... 300 kHz, 80 dB ... 52 dB (V/m); 300 kHz ... 30 MHz, 52 dB ... 34dB (V/m); 30 MHz ... 2 GHz, 54 dB (V/m)

» Ordering key for Level probes type PLCA 55 PLCA 55 Point Level Control Approval

55	PLCA	A-55 Po	int Leve	Тур				
	DC 5	5 V (+/-		Voltage rating				
	1	Baya	onet 10					
	2		ad 5/8					
	3		onet to	Connection type				
	4		nector t					
	5			stando	_			
	6		le 10m					
		1				ds of si	milar viscosity's	Medium
		2		il and f				
			01		5 x 1,5			
			02		8 x 1,5	stand		
			03	G 1/		Thread sizes		
			04	G 3,				Thread sizes
			05		NPTF			
			06		'NPTF			
			07		4 x 1,5			
				1			High Level HL High Level HL	
				2			Function	
				3		mum,		
				4	Max	imum,		
					2	0 se	c standard	Functional test
					2	∠ se 1 se		
					ు	1 se	7 sec standard	
						2	15 sec	
						3	3 sec	
						4	20 sec	Response delay
						5	17 sec	
						6	3600 sec	
						7	2 sec	
						8	0 sec	
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≥°	nec	liun	ead	ctio	Functional test	Response delay		
Typ/Voltage rating	Connection type	Medium	Thread sizes	Function	Fun	Res		
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