



CPA-K-358

- hydrostatic level transmitter
- detachable probe, diameter 39.5 mm
- nominal pressure: from 0...40 cmH₂O up to 0...100 mH₂O
- output signals: 2-wire: 4...20 mA; 3-wire: 0...10 V
- stainless steel probe, ceramic sensor
- accuracy 0.35 % / 0.25 % span
- especially for sewage, viscous and pasty media
- optional: diaphragm 99.9 % Al₂O₃, different kinds of cables and seals
- certified for contact with drinking water by the Polish National Institute of Public Health (PZH) - EPDM/PUR version

The detachable stainless steel probe **CPA-K-358** has been designed for level measurement in waste water, waste and higher viscosity media.

Basic element is a capacitive ceramic sensor. In order to facilitate stock-keeping and maintenance the transmitter head is plugged to the cable assembly with a connector and can be changed easily.

PREFERRED AREAS OF USE ARE



Water

- ground water level measurement
- rain spillway basin



Sewage

- waste water treatment
- water recycling



Fuel / Oil

- level monitoring in open tanks with low filling heights
- fuel storage
- tank farms / biogas plants

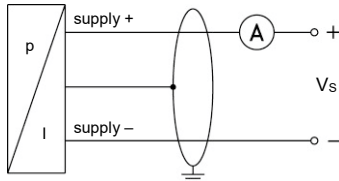
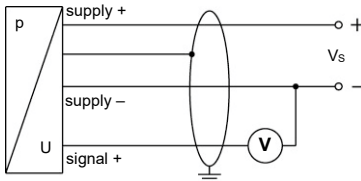
TECHNICAL DATA

Input pressure range														
Nominal pressure gauge	[bar]	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10
Level	[mH ₂ O]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100
Overpressure	[bar]	2	2	4	4	6	6	8	8	15	25	25	35	35
max. ambient pressure (housing)		40 bar												
Output signal / Supply														
Standard		2-wire: 4 ... 20 mA / V _S = 9 ... 32 V _{DC}												
Option 3-wire		3-wire: 0 ... 10 V / V _S = 12.5 ... 32 V _{DC}												
Performance														
Accuracy ¹		standard: ≤ ± 0.35 % span option: ≤ ± 0.25 % span												
Permissible load		R _{max} = [(V _S – V _{S min}) / 0.02 A] W												
Influence effects		supply: 0.05 % span / 10 V load: 0.05 % span / kW												
Long term stability		≤ ± 0.1 % span / year												
Turn-on time		700 msec												
Mean response time		< 200 msec							measuring rate 5/sec					
Max. response time		380 msec												
¹ accuracy according to EN IEC 62828-2– limit point adjustment (non-linearity, hysteresis, repeatability)														
Thermal effects (Offset and Span)														
Thermal error		≤ ± 0.1 % span / 10 K in compensated range 0 ... 70 °C												
Permissible temperatures														
Permissible temperatures		Medium/ electronics/ environment/ storage: -20 ... 125 °C *												
<i>*If the cable is intended for use in a smaller temperature range, the use of the probe is limited by this range.</i>														
Electrical protection ²														
Short-circuit protection		permanent												
Reverse polarity protection		no damage, but also no function												
Lightning protection		2-wire: integrated							3-wire: without					
Electromagnetic compatibility		emission and immunity according to EN 61326												
² additional external overvoltage protection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference available on request														

Level transmitters

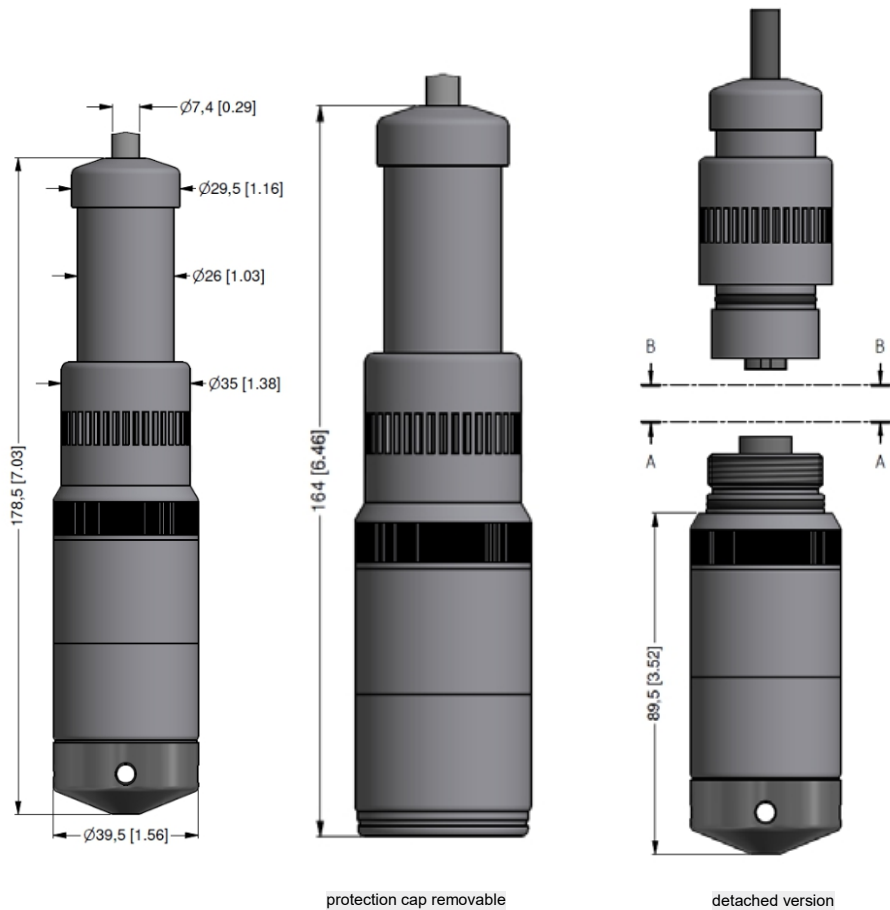
Electrical connection			
Cable with sheath material ³	PVC	(-5 ... 70 °C) grey	(-25 ... 70 °C in fixed condition) Ø 7,4 mm
	PUR	(-25 ... 80 °C) black	(with drinking water certificate) Ø 7,4 mm
	FEP ⁴	(-25 ... 75 °C) black	Ø 7,4 mm
	TPE-U	(-25 ... 125 °C) blue	Ø 7,4 mm
Bending radius	static installation: 10-fold cable diameter; dynamic application: 20-fold cable diameter		
³ shielded cable with integrated air tube for atmospheric pressure reference			
⁴ do not use freely suspended probes with an FEP cable if effects due to highly charging processes are expected			
Materials (media wetted)			
Housing	stainless steel 1.4404 (316L)		
Seals	FKM EPDM (with drinking water certificate) others on request		
Diaphragm	standard: ceramics Al ₂ O ₃ 96 % option: ceramics Al ₂ O ₃ 99.9 %		
Cable sheath	PVC / PUR (with drinking water certificate) / FEP / TPE-U		
Protection cap	POM-C		
Miscellaneous			
Current consumption	max. 21 mA		
Weight	approx. 650 g (without cable)		
Ingress protection	IP 68		
CE-conformity	EMC Directive: 2014/30/EU		

ELECTRICAL CONNECTION

Wiring diagram			
2-wire-system (current) 	3-wire-system (voltage) 	connector 	
Pin configuration			
Electrical connection	Binder series 723 ⁶ (5-pin)		cable colours (DIN 47100)
	2 - wire	3 - wire	
Supply +	3	3	wh (white)
Supply -	1	4	bn (brown)
Signal + (only for 3-wire)	-	1	gn (green)
Shield	5	5	gn/ ye (green / yellow)
⁶ in detached version			



DIMENSION DRAWINGS



ACCESSORIES

Assembling flange with cable gland			
Technical Data			
Suitable for	all probes		
Flange material	stainless steel 1.4404 (316L)		
Material of cable gland	standard: brass, zinc plated on request: stainless steel 1.4305 (303); plastic		
Seal insert	material: TPE (ingress protection IP 68)		
Hole pattern	according to DIN 2507		
Version	Size (in mm)	Weight	
DN25 / PN40	D = 115, k = 85, b = 18, n = 4, d = 14	1.4 kg	
DN50 / PN40	D = 165, k = 125, b = 20, n = 4, d = 18	3.2 kg	
DN80 / PN16	D = 200, k = 160, b = 20, n = 8, d = 18	4.8 kg	
Ordering type		Ordering code	
Assembling Flange DN25 / PN40		5000275	
Assembling Flange DN50 / PN40		5000278	
Assembling Flange DN80 / PN16		5000279	
Cable clamp			
Technical Data			
Suitable for	all probes with cable $\hat{C}$ 5.5 ... 10.5 mm		
Material	standard: steel, zinc plated optionally: stainless steel 1.4301 (304)		
Weight	approx. 160 g		
Ordering type		Ordering code	
Terminal clamp, of steel, zinc plated		1003440	
Terminal clamp, of stainless steel 1.4301 (304)		1000278	



3 - drinking water certification only possible with EPDM seal (code 3) in combination with PUR cable

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