

CPA-K-382



- hydrostatic level transmitter
- submersible probe, diameter 39.5 mm
- nominal pressure: from 0...40 cmH₂O up to 0...200 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 stainless steel probe **CPA-K-382** has been designed for continuous level measurement in waste water, waste and high viscosity media.

Basic element is a robust and high overpressure capable capacitive ceramic sensor e.g. for low levels easily.

PREFERRED AREAS OF USE ARE



Water

- drinking water abstraction



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	16	20
Level	[mH ₂ O]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	200
Overpressure	[bar]	2	2	4	4	6	6	8	8	15	25	25	35	35	45	45
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
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 *
*If the cable is intended for use in a smaller temperature range, the use of the probe is limited by this range.	

Electrical protection ²	
Short-circuit protection	permanent
Reverse polarity protection	no damage, but also no function
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	

Electrical connection (only for 4 ... 20 mA / 2-wire)	
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
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	

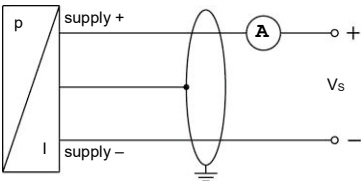
Level transmitters

Materials (media wetted)	
Housing	stainless steel 1.4404 (316 L)
Seals	FKM FFKM EPDM (with drinking water certificate) others on request
Diaphragm	standard: ceramics Al ₂ O ₃ 96 % option: ceramics Al ₂ O ₃ 99.9 %
Nose cone	POM
Miscellaneous	
Current consumption	max. 21 mA
Weight	approx. 400 g (without cable)
Ingress protection	IP 68
CE-conformity	EMC Directive: 2014/30/EU

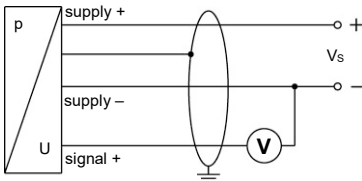
ELECTRICAL CONNECTION

Wiring diagram

2-wire-system (current)

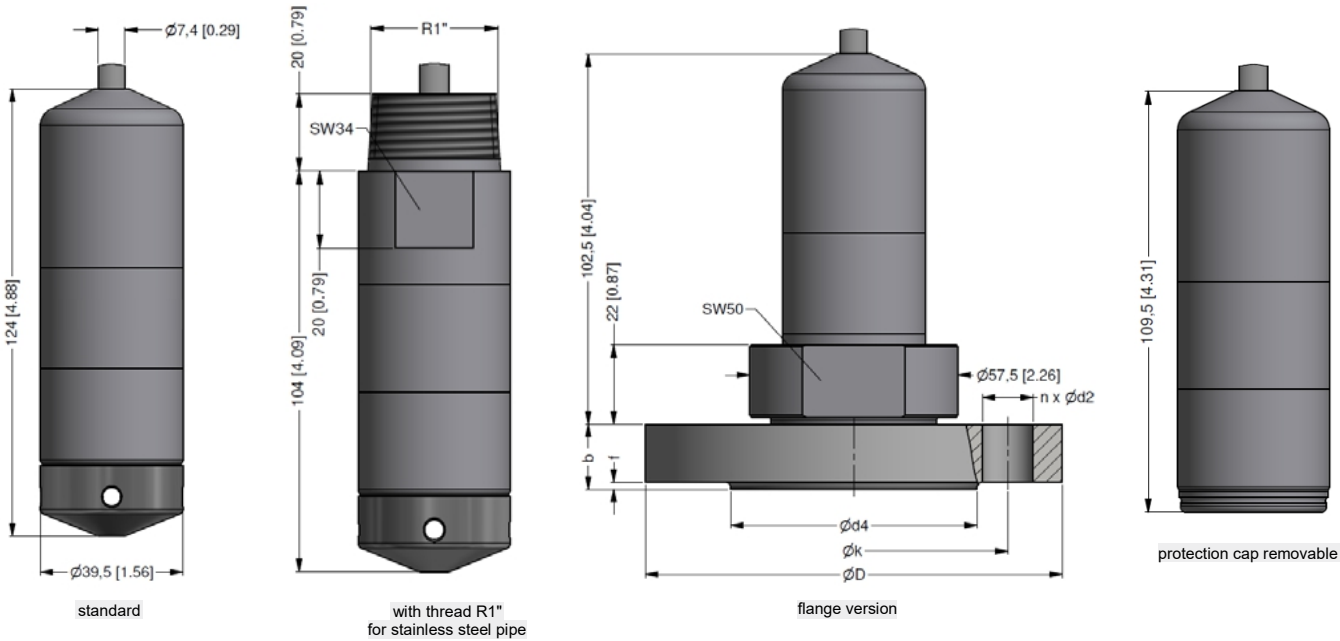


3-wire-system (voltage)



Pin configuration	
Electrical connection	cable colours (IEC 60757)
Supply +	wh (white)
Supply -	bn (brown)
Signal + (only for 3-wire)	gn (green)
Shield	gn/ye (green / yellow)

DIMENSION DRAWINGS



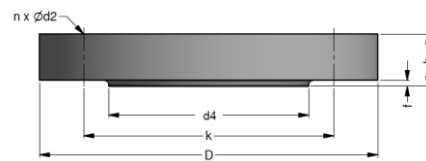
dimensions in mm				
dimen- sions	DN25 / PN40	DN40/ PN40	DN50 / PN40	DN80 / PN16
D	115	150	165	200
k	85	110	125	160
d4	68	88	102	138
b	18	18	20	20
f	2	3	3	3
n	4	4	4	8
d2	14	18	18	18

ACCESSORIES

Transmitter flange for flange version

Technical data

Suitable for	CPA-K-382	
Flange material	stainless steel 1.4404 (316L)	
Hole pattern	according to DIN 2507	
Version	Size (in mm)	Weight
DN25 / PN40	D = 115, k = 85, b = 18, n = 4, d = 14	1.2 kg
DN50 / PN40	D = 165, k = 125, b = 20, n = 4, d = 18	2.6 kg
DN80 / PN16	D = 200, k = 160, b = 20, n = 8, d = 18	4.1 kg



Ordering type

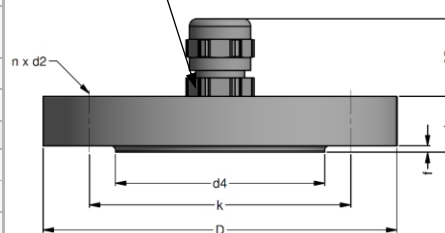
Transmitter flange DN25 / PN40	Ordering code
Transmitter flange DN50 / PN40	ZFS2540
Transmitter flange DN80 / PN16	ZFS5040
	ZFS8016

Mounting flange with cable gland

Technical data

Suitable for	all probes	
Flange material	stainless steel 1.4404 (316L)	
Material of cable gland	standard: brass, nickel 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

cable gland M16x1.5 with
seal insert (for cable-Ć 4 ... 11 mm)



Ordering type

DN25 / PN40 with cable gland brass, nickel plated	Ordering code
DN50 / PN40 with cable gland brass, nickel plated	ZMF2540
DN80 / PN16 with cable gland brass, nickel plated	ZMF5040
	ZMF8016

Terminal clamp

Technical Data

Suitable for	all probes with cable Ć 5.5 ... 10.5 mm	
Material	standard: steel, zinc plated optionally: stainless steel 1.4301 (304)	
Weight	approx. 160 g	



Ordering type

Terminal clamp, steel, zinc plated	Ordering code
Terminal clamp, stainless steel 1.4301 (304)	1003440
	1000278



