

CPA-325S



- hydrostatic level transmitters
- nominal range: from 0...1 mH₂O up to 0...250 mH₂O
- output signal: 2-wire: 4...20 mA; 3-wire: 4...20 mA / 0...20 mA / 0...10 V / 0...5V (option)
- stainless steel probe and diaphragm (diameter 48 mm)
- separator diameter 76 mm
- accuracy from 0.35 % span
- high resistance to contamination and deposits
- high resistance to mechanical damage
- optional: different kinds of cable

The CPA-325S hydrostatic level probe is designed to measure the level of liquids containing impurities and suspended solids. It is ideal for monitoring wastewater in pumping stations, fermentation chambers, settling tanks, and similar installations.

A large, thickened membrane (48 mm) in a special separator reduces the impact of sediments and enables stable operation in contaminated media, including those with abrasive particles, such as sand. The membrane can be cleaned with a gentle stream of water. However, the use of pressurized water is not recommended, as it may damage the probe.

PREFERRED AREAS OF USE ARE



Sewage
waste water treatment
water recycling
dumpsite



TECHNICAL DATA

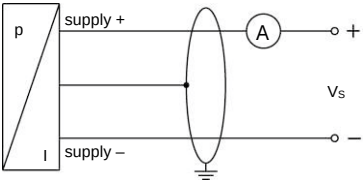
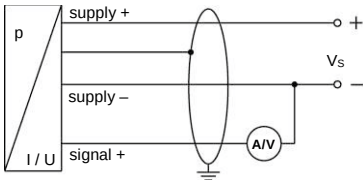
Input pressure range														
Nominal pressure gauge	[bar]	0.10	0.16	0.20	0.40	0.60	1	1.6	2.5	4	6	10	16	25
Level	[mH ₂ O]	1	1.6	2	4	6	10	16	25	40	60	100	160	250
Overpressure	[bar]	0.5	1	1	2	5	5	10	10	20	40	40	80	80
Burst pressure ≥	[bar]	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50	50	120	120
Vacuum resistance		P _N ≥ 1 bar: unlimited vacuum resistance P _N < 1 bar: on request												
Output signal / Supply														
Standard		2-wire: 4 ... 20 mA / V _S = 8 ... 32 V _{DC}												
Options 3-wire		3-wire: 0 ... 20 mA / V _S = 14 ... 30 V _{DC} 4 ... 20 mA / V _S = 14 ... 30 V _{DC} 0 ... 5 V / V _S = 14 ... 30 V _{DC} 0 ... 10 V / V _S = 14 ... 30 V _{DC}												
Performance														
Accuracy ¹		nominal pressure < 0.4 bar: ≤ ± 0.5 % span nominal pressure ≥ 0.4 bar: ≤ ± 0.35 % 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 at reference conditions												
Mean response time		≤ 10 ms												
¹ accuracy according to EN IEC 62828-2 – limit point adjustment (non-linearity, hysteresis, repeatability)														
Thermal effects (Offset and Span)														
Nominal pressure P _N		[bar] < 0.40 ≥ 0.40												
Tolerance band		[% span] ≤ ± 1.5 ≤ ± 0.75												
in compensated range		[°C] 0 ... 70												
Permissible temperatures ²		medium ² : -40 ... 125°C for filling fluid (silicon oil) electronics / environment: -40 ... 85°C storage: -40 ... 100°C												
² max. temperature of the medium for nominal pressure gauge > 0 bar: 150 °C for 60 minutes with a max. environmental temperature of 50 °C														
Electrical protection														
Short-circuit protection		permanent												
Reverse polarity protection		no damage, but also no function												
Electromagnetic compatibility		emission and immunity according to EN 61326												
Filling fluids														
Standard		silicon oil												



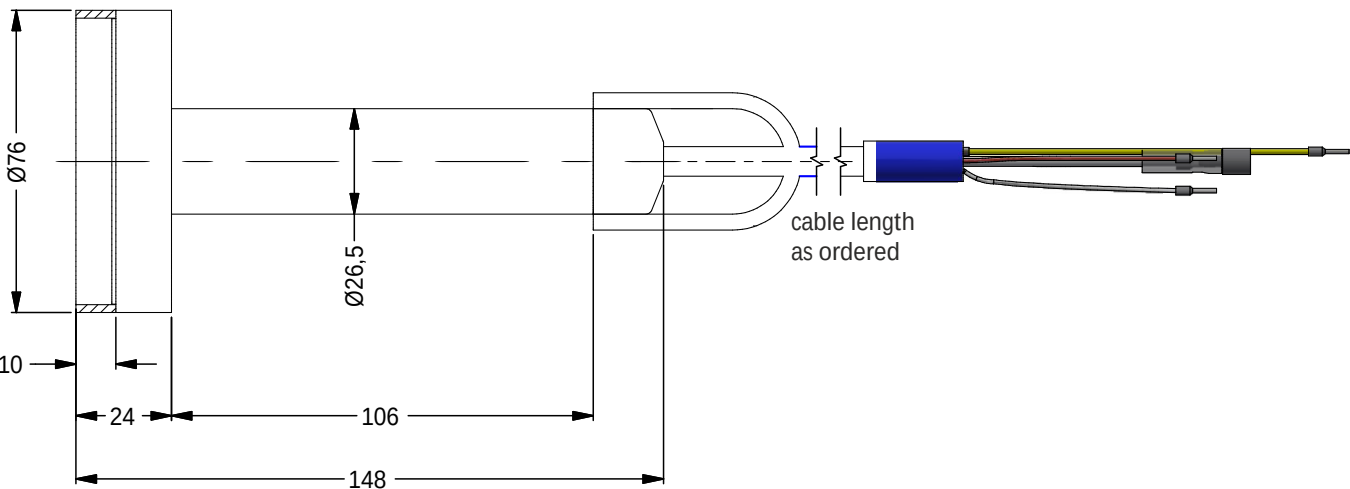
Level transmitters

Materials				
Pressure port	stainless steel 1.4404 (316 L)			
Housing	stainless steel 1.4404 (316 L)			
Diaphragm	stainless steel 1.4435 (316 L)			
Electrical connection				
Cable with sheath material ³	PUR	(-40 ... 80 °C)	black	Ø 7,4 mm
	PVC	(-40 ... 80 °C)	grey	Ø 7,4 mm
	TPE-U	(-40 ... 125 °C)	black	Ø 7,4 mm
	FEP ⁴	(-40 ... 80 °C)	black	Ø 7,4 mm
Cable capacitance	signal line/shield also signal line/signal line: 160 pF/m			
Cable inductance	signal line/shield also signal line/signal line: 1 µH/m			
Bending radius	static installation: 10-fold cable diameter dynamic application: 20-fold cable diameter			
³ 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				
Miscellaneous				
Connecting cables (by factory)	cable capacitance: signal line/shield also signal line/signal line: 160 pF/m cable inductance: signal line/shield also signal line/signal line: 1 µH/m			
Current consumption	signal output current: max. 25 mA			
Weight	approx. 400 g (without cable)			
Ingress protection	IP 68			
CE-conformity	EMC Directive: 2014/30/EU			

ELECTRICAL CONNECTION

Wiring diagrams	
2-wire-system (current) 	3-wire-system (current / voltage) 
Pin configuration	
Electrical connection	cable colours (DIN 47100)
Supply +	wh (white)
Supply -	bn (brown)
Signal + (only 3-wire)	gn (green)
Shield	ye/gn (yellow / green)

DIMENSION DRAWINGS

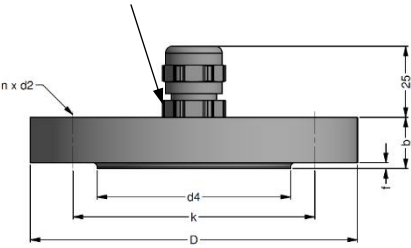


ACCESSORIES

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-C 4 ... 11 mm)



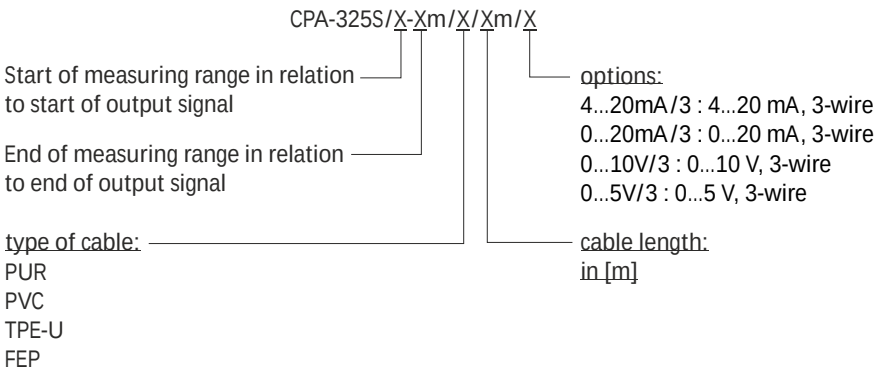
Ordering type		Ordering code
DN25 / PN40 with cable gland brass, nickel plated		ZMF2540
DN50 / PN40 with cable gland brass, nickel plated		ZMF5040
DN80 / PN16 with cable gland brass, nickel plated		ZMF8016

Anchor clamp

Technical Data	
Suitable for	all probes with cable Č 6 ... 9 mm
Material	high quality thermoplastic stainless steel bail
Weight	approx. 120 g
Minimum breaking force	3,6 kN
Ordering code	UMK-1



ORDER CODE



Ordering sample:

CPA-325S/0-4m/PUR/10m

Level probe CPA-325S, measuring range 0...4 mH₂O, with PUR cable, length 10 m, output signal 4...20 mA, 2-wire (standard)

CPA-325S/0-2m/PVC/10m/0...10V/3

Level probe CPA-325S, measuring range 0...2 mH₂O, with PVC cable, length 10 m, output signal 0...10 V, 3-wire