



CPA-P-307T

- hydrostatic level and temperature transmitter
- submersible probe with integrated Pt 100, diameter 27 mm
- nominal range: from 0...1 mH $_2$ O up to 0...250 mH $_2$ O / 0...30°C up to 0...70°C
- output signals: 2-wire: 4...20 mA (separate for pressure and temperature)
- stainless steel probe and sensor
- accuracy 0.5 % / 0.35 % / 0.25 % span
- small thermal effect, high accuracy
- optional: drinking water certificate, different kinds of cables and seals









The stainless steel submersible probe **CPA-P-307T** has been developed for continuous level and temperature measurement in water and in clean to lightly-soiled liquids.

The advantage: simultaneous recording of level and temperature with separate independent signal amplification. The maintenance and wiring costs are considerably reduced. In addition to classical signal processing of the level, an additional signal circuit independent of the level which converts the temperature signal into a 4...20 mA analogue signal in 2-wire technology is provided.

Typical application areas are, for example, drinking water purification, monitoring of rainwater overflow basins and river courses, in addition to level measurement in containers or tank batteries.

PREFERRED AREAS OF USE ARE



Water / filtrated sewage drinking water system water recycling



Fuel / Oil fuel storage tank farm

TECHNICAL DATA

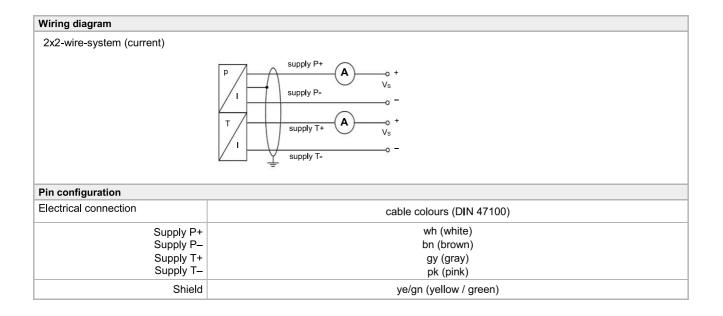
Input pressure range														
Nominal pressure gauge	[bar]	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Level	[mH ₂ O]	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250
Overpressure	[bar]	0.5	1	1	2	5	5	10	10	20	40	40	80	80
Burst pressure >	[bar]	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50	50	120	120
max. ambient pressure (housing)		40 bar												

Input temperature range							
Temperature measuring range	standard	0 30 °C	0 50 °C	0 70 °C			
	others on request1						
¹ min. temperature range: 30°C; max min. temperature: -10°C; max. temp							
Output signal / Supply							
2-wire (pressure) ²	$4 20 \text{ mA} / V_S = 10 30 V_{DC}$						
2-wire (temperature) ²	$4 20 \text{ mA} / V_S = 10 30 V_{DC}$						
² the circuits are galvanically isolated	from each other						
Performance							
Accuracy (pressure) ³	standard: nominal pressi nominal pressi option 1: nominal pressi	ure ≥ 0.4 bar: ≤	≤ ± 0.5 % span ≤ ± 0.35 % span ≤ ± 0.25 % span				
Accuracy (temperature) 4	≤ ± 1 °C		·				
Permissible load	$R_{max} = [(V_S - V_S min) / 0.02 A] \Omega$						
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / kΩ						
Long term stability	≤ ± 0.1 % span / year at reference conditions						
Response time < 10 ms (for output signal 2-wire (pressure))							
³ accuracy according to EN IEC 6282 ⁴ Pt 100 class B; compensation time				ns			
Thermal effects (Offset and Spa	n)						
Nominal pressure P _N [bar]	< 0.4	10	<u>≥</u> 0	.40			
Tolerance band [% span]	≤±	1	≤ ± (0.75			
in compensated range [°C]	0 70						



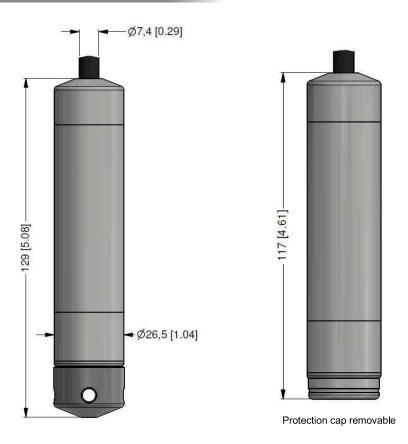
Permissible temperatures							
Permissible temperatures	Medium/ electronics/ environment/ storage: -20 80 °C *						
*If the cable is intended for use in a s	maller temperature range, the use of the probe is limited by this range.						
Electrical protection ⁵							
Short-circuit protection	permanent						
Reverse polarity protection	no damage, but also no function						
Electromagnetic compatibility	emission and immunity according to EN 61326						
⁵ additional external overvoltage prot	ection unit in terminal box KL 1 or KL 2 with atmospheric pressure reference a	available on request					
Electrical connection							
Cable with sheath material ⁶	PVC (-5 70 °C) grey (-25 70 °C in fixed condition) PUR (-25 80 °C) black (with drinking water certificate) FEP ⁷ (-25 75 °C) black TPE-U (-25 125 °C) blue	Ø 7,4 mm Ø 7,4 mm Ø 7,4 mm Ø 7,4 mm					
Bending radius	static installation: 10-fold cable diameter, dynamic application: 20-fold cable diameter						
⁶ cable with integrated air tube for atm ⁷ do not use freely suspended probes	nospheric pressure reference 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	stainless steel 1.4435 (316L)						
Protection cap	POM-C						
Cable sheath	PVC, PUR, FEP, TPE-U, others on request						
Miscellaneous							
drinking water certificate	According to DVGW W 270 and UBA KTW (With order please indicate if device must be certificated for drinking water.)						
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: 1µH/m						
Current consumption	signal output current: max. 25 mA / signal output voltage: max. 7 mA						
Weight	approx. 200 g (without cable)						
Ingress protection	IP 68						
CE-conformity	EMC Directive: 2014/30/EU						

ELECTRICAL CONNECTION





DIMENSION DRAWINGS

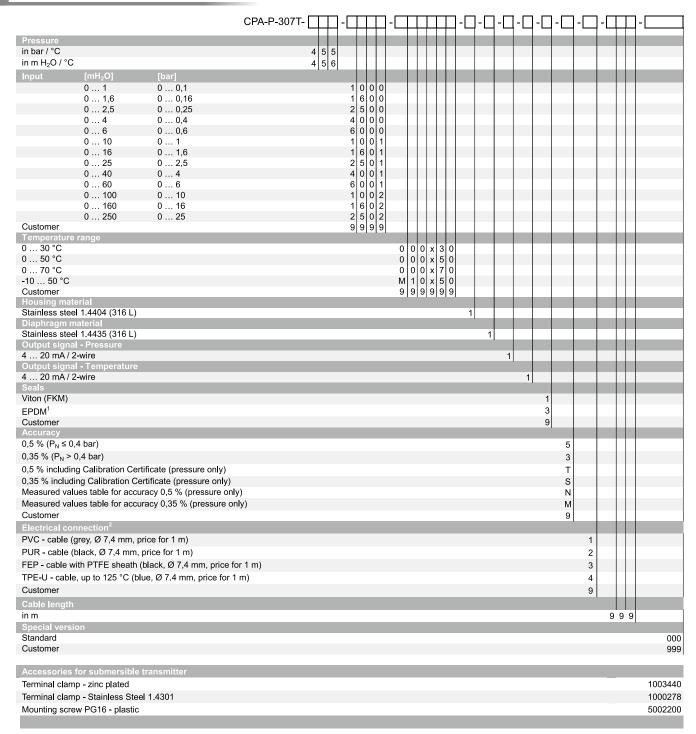


ACCESSORIES

Mounting flange with	cable gland					
Technical data						
Suitable for	all probes	cable gland M16x1.5 with seal insert (for cable-Ø 4 11 mm)				
Flange material	stainless steel 1.4404 (316L)					
Material of cable gland	standard: brass, nickel plated on request: stainless steel 1.4305 (303					
Seal insert	material: TPE (ingress protection IP 68)		n x d2			
Hole pattern	according to DIN 2507					
Version	Size (in mm)	Weight	1			
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	D -			
Ordering type		Ordering code				
DN25 / PN40 with cable	e gland brass, nickel plated	ZMF2540				
DN50 / PN40 with cable	e gland brass, nickel plated	ZMF5040				
DN80 / PN16 with cable	e gland brass, nickel plated	ZMF8016				
Cable clamp						
Technical Data						
Suitable for	all probes with cable ∅ 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 stee	l, zinc plated	1003440				
Terminal clamp, of stair	lless steel 1.4301 (304)	1000278				



ORDER CODE



- 1 drinking water certification only possible with EPDM seal (code 3) in combination with PUR cable
- 2 shielded cable with integrated ventilation tube for atmospheric pressure reference

Manufacturer reserves the right to change sensor specifications without further notice.

