

CPA-K-858



- hydrostatic level transmitter for viscous and aggressive media
- detachable submersible probe, diameter 45 mm
- nominal pressure: from 0...40 cmH₂O up to 0...100 mH₂O
- output signals: 2-wire: 4...20 mA; 3-wire: 0...10 V
- plastic probe
- ceramic sensor
- accuracy 0.35 % / 0.25 % span
- chemical resistance, housing material PP-HT or PVDF
- optional: diaphragm 99.9 % Al₂O₃, different kinds of cables and seals



The detachable plastic submersible probe **CPA-K-858** is designed for level measurement in most aggressive media. Usage in more viscous media as for example sludge is possible because of the semiflush diaphragm. 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



Sewage
waste water treatment
water recycling
dumpsite



Aggressive media
most of acids and lyes

TECHNICAL DATA

Input pressure range		0.04	0.06	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10
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)		10 bar												

Output signal / Supply	
Standard	2-wire: 4 ... 20 mA / V _S = 9 ... 32 V _{DC} option 3-wire: 0 ... 10 V / V _S = 12.5 ... 32 V _{DC}

Performance	
Accuracy	IEC 60770 ¹ standard: ≤ ± 0.35 % span option: ≤ ± 0.25 % span
Permissible load	R _{max} = [(V _S - V _{S min}) / 0.02 A] Ω
Influence effects	supply: 0.05 % span / 10 V load: 0.05 % span / kΩ
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 ... 50 °C

Permissible temperatures	
Permissible temperatures	Medium/ electronics/ environment/ storage: -20 ... 80 °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
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

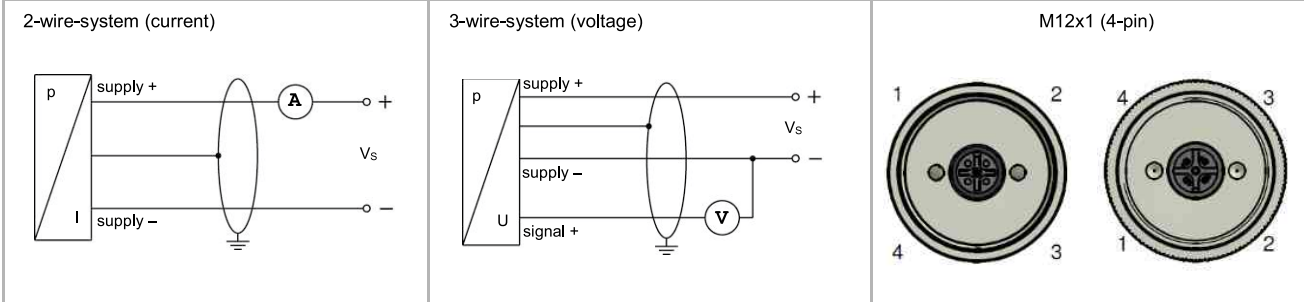


Level transmitters

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
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		
Materials (media wetted)		
Housing	PP-HT	
Seals	FKM / EPDM / others on request	
Diaphragm	standard: ceramics Al ₂ O ₃ 96 % option: ceramics Al ₂ O ₃ 99.9 %	
Cable sheath	PVC, PUR, FEP, others on request	
Miscellaneous		
Option cable protection (on request)	prepared for mounting with PP-HT pipe Ø 25 mm; available as compact product (standard: pipe with a total length up to 2 m possible)	
Current consumption	max. 25 mA	
Weight	approx. 400 g (without cable)	
Ingress protection	IP 68	
CE-conformity	EMC Directive: 2014/30/EU	

ELECTRICAL CONNECTION

Wiring diagram



Pin configuration

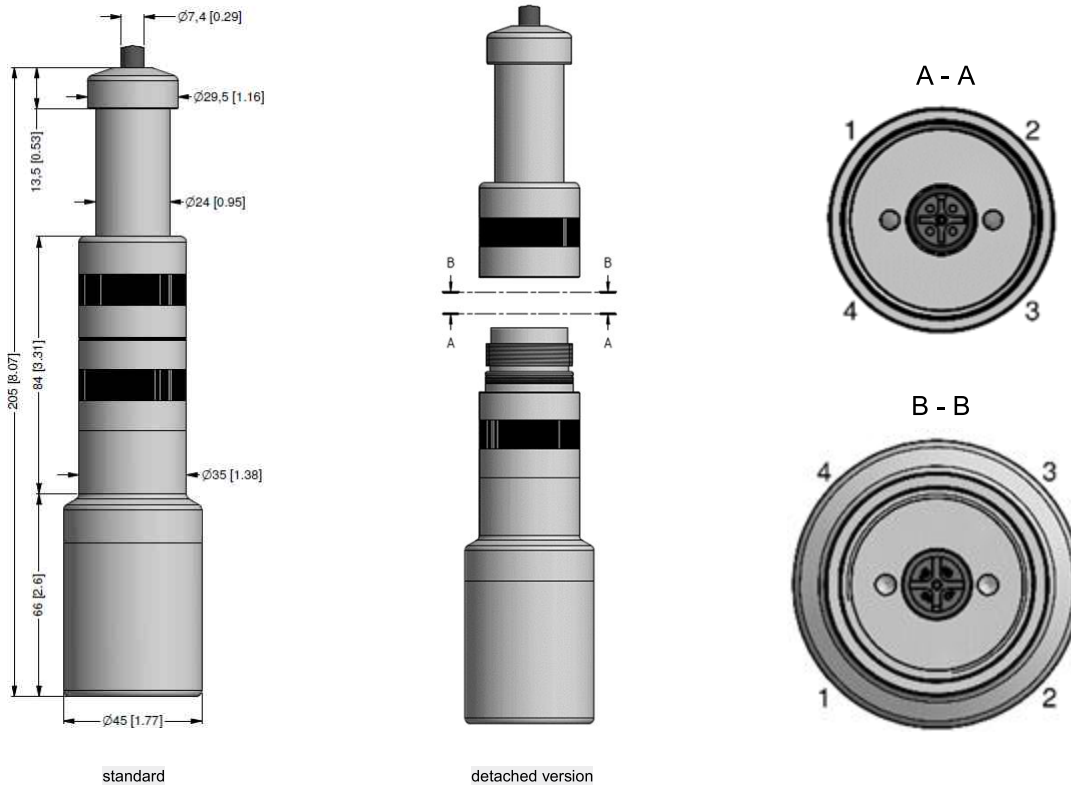
Electrical connection	M12x1 (4-pin) ⁵	cable colours (DIN 47100)
Supply +	3	wh (white)
Supply -	4	bn (brown)
Signal + (only for 3-wire)	1	gn (green)
Shield	2	gn/ye (green / yellow)

⁵ in detached version



Level transmitters

DIMENSION DRAWINGS



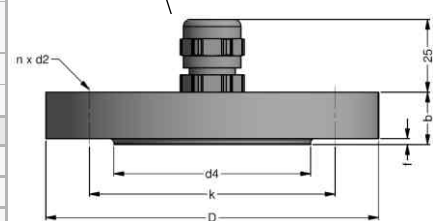
ACCESSORIES

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

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



Ordering type

Assembling Flange DN25 / PN40	5000275
Assembling Flange DN50 / PN40	5000278
Assembling Flange DN80 / PN16	5000279

Terminal clamp

Technical Data

Suitable for	all probes with cable Ø 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	



Level transmitters

ORDER CODE

CPA-K-858- - - - - - - - -

Pressure										
in bar	4	1	5							
in m H ₂ O	4	1	6							
Input										
	[mH ₂ O]	[bar]								
0...0.4	0...0,04		0	4	0	0				
0...0.6	0...0,06		0	6	0	0				
0...1.0	0...0,1		1	0	0	0				
0...1.6	0...0,16		1	6	0	0				
0...2.5	0...0,25		2	5	0	0				
0...4.0	0...0,4		4	0	0	0				
0...6.0	0...0,6		6	0	0	0				
0...10	0...1.0		1	0	0	1				
0...16	0...1,6		1	6	0	1				
0...25	0...2,5		2	5	0	1				
0...40	0...4.0		4	0	0	1				
0...60	0...6.0		6	0	0	1				
0...100	0...10		1	0	0	2				
Customer			9	9	9	9				
Housing material										
PP-HT							R			
PVDF (accuracy 0,5 %)							B			
Customer							9			
Diaphragm material										
Ceramic Al ₂ O ₃ 96 %							2			
Ceramic Al ₂ O ₃ 96 % with PTFE foil (accuracy ≥ 1 %)							3			
Ceramic Al ₂ O ₃ 99,9 %							C			
Customer							9			
Output signal										
4 ... 20 mA / 2-wire							1			
0 ... 10 V / 3-wire ³							3			
Customer							9			
Seals										
Viton (FKM)							1			
EPDM							3			
Customer							9			
Electrical connection										
Without cable part							0			
PVC - cable (grey, Ø 7,4 mm, price for 1 m)							1			
PUR - cable (black, Ø 7,4 mm, price for 1 m)							2			
FEP - cable with PTFE sheath (black, Ø 7,4 mm, price for 1 m)							3			
Customer							9			
Accuracy										
0,5 % (PVDF housing)							5			
0,35 % (standard)							3			
0,25 %							2			
0,35 % including Calibration Certificate							S			
Customer							9			
Cable length										
in m								9	9	9
Special version										
Standard								0	0	0
Prepared for mounting with protecting pipe Ø 20 mm								1	0	6
Customer								9	9	9
Accessories for submersible transmitter										
Cabel part + price for cabel in m								5000695	5000722	
Terminal clamp - zinc plated								1003440		
Terminal clamp - Stainless Steel 1.4301								1000278		
Mounting screw PG16 - plastic								5002200		

- 1 - shielded cable with integrated ventilation tube for atmospheric pressure reference
- 2 - pipe is not part of the supply
- 3 - maximum length of PVC cable – 25 m, PUR, FEP, TPE – 40 m

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

