

## Mounting instructions



Probe CPA-P with Modbus RTU interface RS485  
Probe CPA-P / CPA-K  
Combined level, conductivity and temperature probe

CPA-K-306, CPA-K-307, CPA-K-358, CPA-K-358H,  
CPA-K-382, CPA-K-382H, CPA-K-387, CPA-K-807,  
CPA-K-809, CPA-K-858

CPA-P-305, CPA-P-307, CPA-P-307i, CPA-P-307T,  
CPA-P-308, CPA-P-308i, CPA-P-808

CPA-P-307i-RS, PPT-P-307i-RS, CPA-P-331i-RS



CPA-P-308

SIMEX Sp. z o.o. - All rights reserved

Version: MA\_CPA\_K\_P\_INSSXEN\_v.1.00.002

SIMEX Sp. z o.o. - All rights reserved

These mounting instructions are an excerpt from the complete operating manual. It may be downloaded from our homepage, if you are not familiar with the device.



[www.simex.pl](http://www.simex.pl)

- Technical modifications reserved -

**WARNING!** In order to avoid hazards to operators and damages to the device, the following instructions have to be performed by qualified technical personnel.

**WARNING!** Adhere to the safety and operating instructions stated in the operation manual. Effective regulations on occupational safety, accident prevention as well as national installation standards and approved engineering techniques must in addition be complied with.

**WARNING!** Before the installation: make sure that the inside of the threaded neck of the closed valve is clean. If need, remove the residual liquid in a proper way. Do not mount the device against the liquid inside the thread connection.

## Limitation of liability

If the instructions in the operating manual are not adhered to or if the device is inappropriately used, modified or damaged, liability is not assumed and warranty claims will be excluded.

## Intended use

Ensure that the medium is compatible with the media wetted parts and that the device is suitable for the application without restrictions. The technical data listed in the current data sheet is binding and must definitely be observed.

## Product identification

nominal pressure range	designation	ordering code	serial number
SIMEX Sp. z o.o., 80-556 Gdańsk, ul. Wielopole 11 Poland, tel. (+48 58) 762-07-77, www.simex.pl			
CPA-P-307	450-2500-1-1-1-1-5-1-015-000	SN: 2292088	
Input: 0... 4 mH <sub>2</sub> O gauge	Connector Pinout:		
Output: 4... 20 mA / 2 wire	Vs+ : wh		
Supply: 8... 32V DC	Vs- : bn Shield : gn/ye		
signal	supply	connector pinout	

## Mounting

- Carefully remove the pressure measuring device from the package and dispose of the package properly.
- Mount the device according to your demands.
- Flange version has to be tightened by an open-end wrench (approx. 25 Nm).

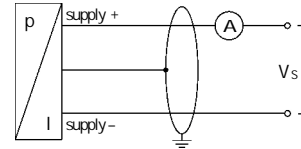
Usually, the probe has been delivered without mounting accessories. For different mounting demands, Simex offers as accessories mounting clamps, terminal clamps and mounting flanges.

## Pin configuration

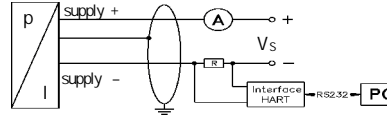
Electrical connections	cable colours
Supply +	wh (white)
Supply -	bn (brown)
Signal + (only 3-wire)	gn (green)
Shield	gr/ye (green/yellow)
CPA-P-307T	cable colours
Supply P+	wh (white)
Supply P-	bn (brown)
Supply T+	gy (gray)
Supply T-	pk (pink)
Shield	gr/ye (green/yellow)
PPT-P-307i-RS	cable colours
Supply +	wh (white)
Supply -	bn (brown)
A +	ye (yellow)
B -	pk (pink)

## Wiring diagrams

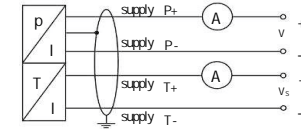
### 2-wire-system (current)



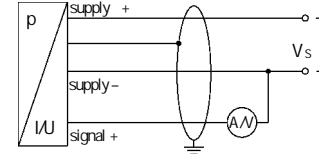
### 2-wire-system (current) HART



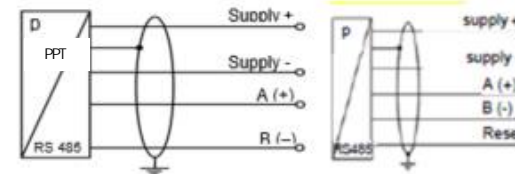
### 2x2-wire-system (current) (CPA-P-307T)



### 3-wire-system (current/supply)



### RS 485 / Modbus RTU; RS 485 / Modbus RTU with reset function



Gauge/relative devices are equipped with cable with integrated air tube for atmospheric pressure reference. Install cable end in a control cabinet or suitable terminal box in dry area which is free of aggressive gasses to avoid damages.

For the electrical connection a shielded and twisted multicore cable is recommended.

## Removing the protection cap (if necessary)

If the device shall be used in high-viscosity media, a careful removal of the cap before start-up is necessary (if existing).

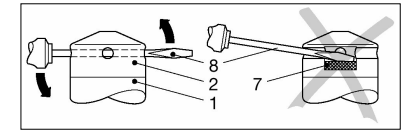
To prevent a damage of the diaphragm, please follow these instructions.

### Removal by hand

- Hold the probe in a way that the protection cap points upwards.

- Hold the probe with one hand on the sensor section (1).
- Remove the protection cap (2) with the other hand.

### Removal with a tool (recommended)



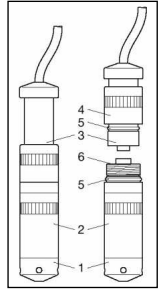
- Hold the probe in a way that the protection cap points upwards.
  - Slide a small tool such as a screwdriver (8) straight through two opposite drill holes in the protective cap (2).
  - Lever it off by moving up the handle of the screwdriver.
- Make sure that the sensor (7) under the protection cap will not be damaged!

## Separability (with CPA-K-358, CPA-K-358H, CPA-P-808, CPA-K-858, CPA-P-308, CPA-P-308i), PPT-P-307i-RS

In order to facilitate stock keeping and maintenance, the probe head is plugged to the cable assembly with a connector and can be easily changed.

### Disassembly

- Hold the probe on the sensor section (2) with one hand and turn the nut (4) carefully to the left with the other hand. Prevent torsion of the cable section (3) against the housing!
- While screwing and pulling off the sensor section (2) from the cable section (3), hold it straight to prevent damages on the plugs.



### Assembly

- Check the o-rings (5, 6) and exchange damaged o-rings if necessary.
- Lubricate the radial o-rings (5) with Vaseline or o-ring grease.
- Remove any grease residue from the axial-o-ring (6).
- Plug the cable section (3) straight into the plug of the sensor section (2).
- Hold the probe onto the sensor section (2) with one hand. Screw on and tighten the nut (4) carefully with the other hand. Prevent torsion of the cable section (3) against the housing!

### Pin configuration of plug

Electrical connections	Binder series 723 (5-pin)	Binder series 723 (7-pin)
<b>2-wire system</b>		
Supply +	3	3
Supply -	1	1
Shield	5	2
<b>3-wire system</b>		
Supply +	3	3
Supply -	4	1
Signal +	1	6
Shield	5	2
<b>Communication interface</b>		
RxD	-	4
TxD	-	5
GND	-	7