

CPA-K-809



- hydrostatic level transmitter for viscous and aggressive media
- submersible probe, diameter 45 mm
- nominal pressure: from 0...0.4 mH₂O up to 0...100 mH₂O
- output signals: 2-wire: 4...20 mA; 3-wire: 0...10 V
- high purity ceramic sensor
- plastic probe
- accuracy 0.35 % / 0.25 % span
- chemical resistance, high overpressure resistance, diaphragm 99.9 % Al₂O₃, housing material PP-HT or PVDF
- optional: various kinds of cables and seals



The plastic submersible probe **CPA-K-809** is designed for continuous level measurement in waste water or in most of aggressive media. Basic element is a capacitive ceramic sensor. Basic element of the plastic probe is the flush mounted ceramic sensor, which makes cleaning easier when solid parts of the medium deposit on it. Different cable and seal materials are available in order to achieve maximum media compatibility.

PREFERRED AREAS OF USE ARE



Sewage
waste water treatment
water recycling
dumpsite



Aggressive media
most of acids and lyes

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 |
| 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 | 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 _{Smin}) / 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 ... 70 °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 |
| 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 | |



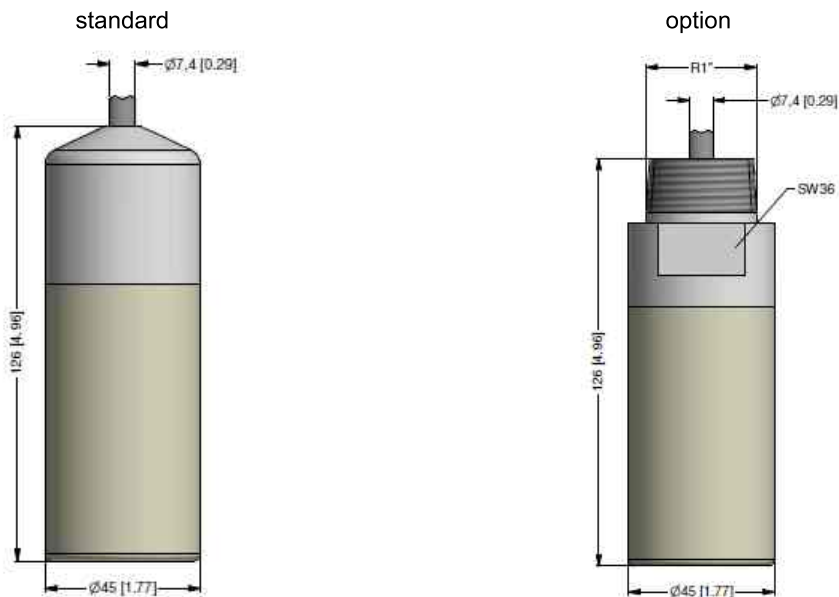
Level transmitters

| Electrical connection | | |
|--|--|----------------------------------|
| Cable with sheath material ³ | PUR (-25 ... 80 °C) black (with drinking water certificate) FEP ⁴ (-25 ... 75 °C) black TPE-U (-25 ... 125 °C) blue | Ø 7,4 mm Ø 7,4 mm 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 | standard: PP-HT option: PVDF | |
| Seals | FKM / EPDM / FFKM | |
| Diaphragm | ceramics Al ₂ O ₃ 99.9 % | |
| Cable sheath | PUR, FEP, TPE-U | |
| Miscellaneous | | |
| Option pipe R1" | prepared for mounting with plastic pipe | |
| 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 | max. 21 mA | |
| Weight | approx. 320 g (without cable) | |
| Ingress protection | IP 68 | |
| CE-conformity | EMC Directive: 2014/30/EU | |

ELECTRICAL CONNECTION

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

DIMENSION DRAWINGS



prepared for mounting with pipe R1"

