

CAPACITIVE FILLING LEVEL SENSORS 1000

dimensions M30 x 1,5

G¾"

G1"

level detection operating point media touching



- √ very insensitive to soiling of any kind
- ✓ LED function display
- √ high-quality parts for a long service life
- √ fully electronic with integrated amplifier
- ✓ DC-devices with short-circuit and reverse polarity protection

anti-static Teflon housing resistant to acids and bases











description

All media that surround the sensor head change the dielectric balanced state between the meter electrode and the surrounding space. This process is converted to a switching signal. The optimum sensitivity adjustment is performed by a potentiometer that is covered with a plastic screw.

The sensor should penetrate at least 15mm into the container

Calibration to the surrounding medium is performed under operating conditions.

Beginning with the left limit stop of the adjustment potentiometer, it is turned clockwise until the switching output switches.

A safe switching point is achieved by turning the potentiometer clockwise another one-half to full turn.

The sensors perform particularly well with liquid and viscous media. An internal decoupling electrode largely eliminates interfering influences that can be caused by drop formation or a liquid film. The electronics are fully compoundfilled and, thus, safely protected against aggressive environmental influences, humidity and shocks. Containers made of metal or with metallic coatings as well as plastic containers with electrically conductive media should be grounded.

application examples

- detection of the filling level of liquid and viscous media
- also suitable for the level detection of grainy, powdery and granular media





| version | FK300100 | FK304100 | |
|---|---|--|--|
| | M30x1.5 | M30x1.5 | |
| output | pnp, no | AC, no | |
| article-no. | FK300200 | - | |
| version | M30x1.5 | | |
| output | pnp, nc | M30x1.5 W36 Poti | |
| | | | |
| operating point | media touching the sensor tip see above | media touching the sensor tip see above | |
| operating point | the sensor tip | the sensor tip | |
| operating point output signal operating voltage | the sensor tip see above | the sensor tip see above | |
| operating point output signal operating voltage current consumption (w/o load) | the sensor tip see above 10 55V DC | the sensor tip see above 20 250V AC | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) | the sensor tip see above 10 55V DC ≤ 4mA | the sensor tip see above 20 250V AC ≤ 2.5mA | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) | the sensor tip see above 10 55V DC ≤ 4mA 400mA | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz | |
| TECHNICAL DATA operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) sensitivity adjustment | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED - potentiometer | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) sensitivity adjustment short-circuit protection | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED - potentiometer | |
| poperating point poutput signal poperating voltage current consumption (w/o load) poutput current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) sensitivity adjustment short-circuit protection reverse polarity protection | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED - potentiometer + + | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED - potentiometer - | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) sensitivity adjustment short-circuit protection reverse polarity protection dimensions | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED - potentiometer + + M30x1.5 | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED - potentiometer - M30x1.5 | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) sensitivity adjustment short-circuit protection reverse polarity protection dimensions length (thread/complete) | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED - potentiometer + + H M30x1.5 65mm/95mm | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED - potentiometer - M30x1.5 65mm/95mm | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) display (operation) sensitivity adjustment short-circuit protection reverse polarity protection dimensions length (thread/complete) housing material | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED - potentiometer + + + M30x1.5 65mm/95mm PTFE (teflon) | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED - potentiometer - M30x1.5 65mm/95mm PTFE (teflon) | |
| operating point output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) switching current (min. load) switching frequency display (signal) | the sensor tip see above 10 55V DC ≤ 4mA 400mA 1V DC - 10Hz yellow LED - potentiometer + + H M30x1.5 65mm/95mm | the sensor tip see above 20 250V AC ≤ 2.5mA 400mA 8V AC 5mA 10Hz yellow LED - potentiometer - M30x1.5 65mm/95mm | |



CAPACITIVE FILLING LEVEL SENSORS 1000

| | P | B1204.44.65 | P | |
|--|---|---|---|---|
| article-no. | FK910100 | FK914100 | FK920400 | FK924100 |
| version | G¾" | G¾" | G1" | G1" |
| output | pnp, no | AC, no | pnp, no/nc | AC, no |
| article-no. | FK910200 | • | - | FK924200 |
| version | G¾" | | | G1" |
| output | pnp, nc | | · | AC, nc |
| | ©24 G3/4" 99 86 | 024 03/4" 99 96 | 61" 60 SW36 Poti | 61* |
| TECHNICAL DATA pperating point putput signal | media touching the sensor tip see above |
| operating voltage | 10 55V DC | 20 250V AC | 10 35V DC | 20 250V AC |
| current consumption (w/o load) | ≤ 4mA | ≤ 2.5mA | ≤ 15mA | ≤ 2.5mA |
| output current (max. load) | 400mA | 400mA | 2 x 250mA | 250mA |
| voltage drop (max. load) | 1V DC | 8V AC | 2V DC | 8V AC |
| switching current (min. load) | | 5mA | 2 V DC | 5mA |
| switching frequency | 10Hz | 10Hz | 50Hz | 25Hz |
| | | | | |
| display (signal) | yellow LED | yellow LED | yellow LED | yellow LED |
| display (operation) | | | green LED | |
| sensitivity adjustment | potentiometer | potentiometer | potentiometer | potentiometer |
| short-circuit protection | + | | + | |
| everse polarity protection | + | | + | - |
| dimensions | G¾" | G¾" | G1" | G1" |
| ength (thread/complete) | 65mm/95mm | 65mm/95mm | 25mm/113mm | 25mm/113mm |
| nousing material | PTFE (Teflon) | PTFE (Teflon) | PTFE (Teflon) | PTFE (Teflon) |
| pperating temperature | -25 +75°C | -25 +75°C | -25 +70°C | -25 +70°C |
| (=1, co=00) | IP67 | IP67 | IP67 | IP67 |
| degree of protection (EN 60529) | 2m cable, PVC, 3-wire | 2m cable, PVC, 2-wire | 2m cable, PUR, 4-wire | 2m cable, PUR, 2-wire |

1000 CAPACITIVE FILLING LEVEL SENSORS

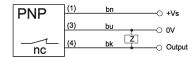


connection

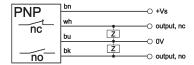
DC-devices, 3-wire, no



DC-devices, 3-wire, nc

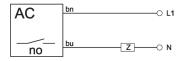


DC-devices, 4-wire, no/nc



AC-devices, 2-wire, no

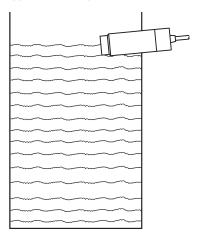
AC-devices, 2-wire, nc





wire colors: bn = brown (1), wh = white (2), bu = blue (3), bk = black (4)

application example



Note: Slanted installation of approx. 20° is recommended to prevent the formation of deposits.

This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the "accessories" section of the catalog under ipf-sensorflex® "cable sockets" or in the search window on our homepage www.ipf-electronic.com (using the search term "VK").

Warning: Never use these devices in applications where the safety of a person depends on their functionality.