Technical Information TI 052F/00/en

Operating Instructions 017185-1000

Capacitance Limit Detection Double Rod Probe 11 304 Z

PTFE fully insulated rod probe for plastic vessels. Certification from DIBt as overspill protection alarm to VAwS (§ 19 WHG).





















Application

The double rod probe 11 304 Z is used in aggressive liquids, particularly in plastic tanks or baths, where there is no counter-potential for capacitance limit detection.

The measuring system includes a capacitance limit switch Nivotester FTC 470 Z, 471 Z.

Features and Benefits

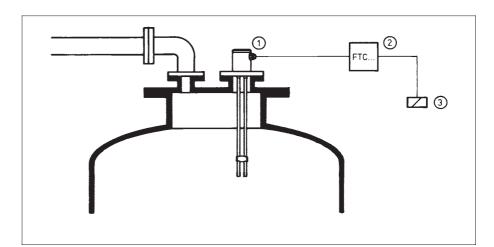
- The second rod removes the need for a separate counter-electrode inside or outside the tank, thus reducing cost.
- The electronic insert is applicable over a wide temperature range.
- The high frequency signal, proportional to level, is converted into a remotely transmitted signal.



Measuring System

The measuring system comprises the following parts (see Fig.):

- Double rod probe 11 304 Z with electronic insert EC 17 Z in probe housing
- ② Capacitance limit switch Nivotester FTC 470 Z, 471 Z
- ③ Signal and control instruments (e. g. klaxon, solenoid valve).



Measuring system.

The electronic insert is a transmitter that converts the high frequency signal, proportional to level, into a remotely transmitted signal, e. g. a pulse frequency signal transmitted over standard screened two-core installation cable.

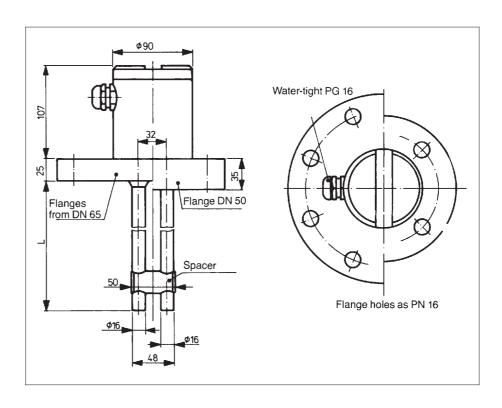
Installation

- Probes of length up to 500 mm are suitable for side and top mounting.
- Larger probes should always be installed vertically.
- A support should be provided for long probes.

Caution!

The probes must not be shortened. This would impair their performance and chemical resistance. Please order the exact length required.

Dimensions



Dimensions of probe 11 304 Z Flanges to DIN 2527

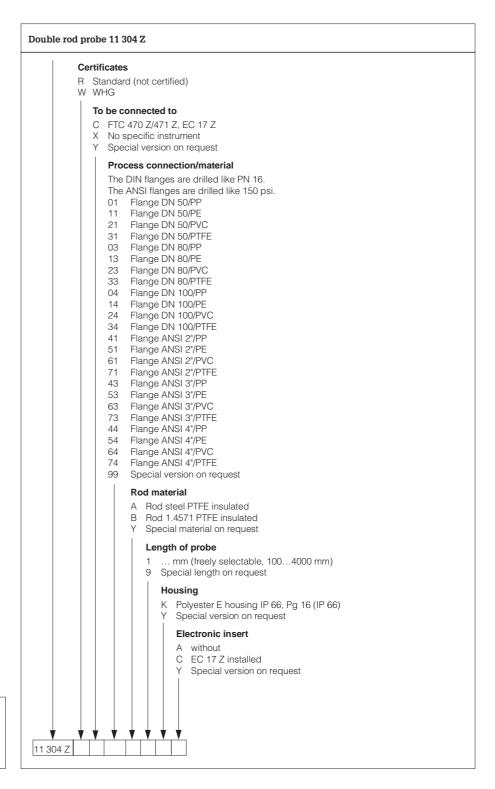
Electrical Connection

The electronic insert EC... can be directly fitted in the probe housing. One rod is connected with the centre contact of the electronic insert; the other is connected via the black wire to terminal 6 of the electronic insert.



Connection of the electronic insert EC... in the probe housing

How to Order



Technical Data

| Operating pressure p _e | -0,2+1,1 bar | -1+6 bar | on request |
|-----------------------------------|--------------|----------------|----------------|
| Operating temperature | −20+60 °C | +20 °C | on request |
| Flange dimension | any | DN 50, ANSI 2" | larger flanges |
| DIBt approval to § 19 WHG | yes | no | _ |

| Capacitance of gland | approx. 50 pF | |
|---------------------------------------|---|--|
| Capacitance probe to probe | approx. 22 pF/m in air, approx. 180 pF/m in water | |
| Probe length L | min. 100 mm, max. 4000 mm | |
| Flange material and sizes | see "How to Order" | |
| Rod probe material | steel or stainless steel 1.4571 | |
| Rod probe insulation | 2 mm PTFE (polytetrafluoroethylene) | |
| Spacer | PTFE (polytetrafluoroethylene) | |
| Number of spacers | 1 per 500 mm probe length | |
| Housing | PE (polyethylene) | |
| O-ring seal in lid | NBR (rubber) | |
| Cable entry Pg 16 | PA (polyamide) with rubber seal for cable diameter 5.513 mm | |
| Housing protection type to DIN 40 050 | IP 66 | |

Accessory

 Metal ring for flange, if the probe housing is installed in explosion-hazardous area Zone 1

Supplementary Documentation

□ Electronic Insert EC 17 Z
Technical Information TI 268F/00/en

Ordering Information

- Order code
- ☐ Probe length
- Accessories

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