



extract from our online catalogue:

***hps+35/DIU/TC/E/G1***

current to: 2026-10-10



## **hps+**

hps+ in safety gear - When you need chemically resistant, pressure-resistant sensors.

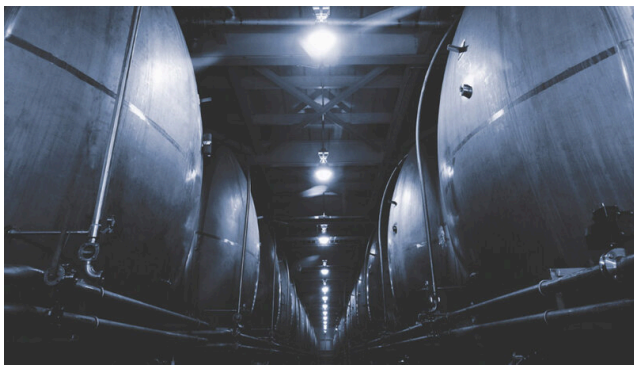
### **Highlights**

- > Optionally used in normal pressure or overpressure
- > PTFE membrane > for protection against aggressive media
- > Stainless-steel or optional PVDF housing for hps+340 > for use in the food industry
- > Sealed against the housing with an O-ring made from FFKM > for the highest possible chemical resistance
- > Digital display with direct measured value output in mm/cm or %
- > Numeric configuration of the sensor using digital display
- > UL Listed > to Canadian and US safety standards
- > 2 switching outputs in pnp variant
- > Analogue output plus 1 pnp switching output
- > 4 detection ranges with a measurement range of 30 mm to 8 m
- > microsonic Teach-in using T1 or T2 buttons
- > 0.025 mm to 2.4 mm resolution
- > Temperature compensation
- > 9–30 V operating voltage
- > LinkControl > for configuration of sensors from a PC

### **Basics**

## ***For fill level measurements of aggressive media and in overpressure***

the ultrasonic transducers of the new hps+ sensors are now fitted out - as standard - with a PTFE film. It is sealed with a FFKM O-ring against the housing made of 1.4571 stainless steel or PVDF. This ensures a high degree of resistance to aggressive media.



*Fill level measurement in tanks*



*hps+340 in highly resistant PVDF housing - PTFE protective film sealed with an O-ring made from FFKM against the housing*

The hps+ sensors can be used for fill level measurement under normal pressure or in tanks and containers with an overpressure of up to 6 bar. Its special software filters also allow its use in containers filled from above or that have a stirring system. Pressure-tight installation in a tank is undertaken by means of a 1" threaded flange or a 2" one in the case of hps+340.

### ***Chemical resistance***

and seal tightness were tested through being stored over cellulose thinner and 1,000,000 alternating pressure stresses. Cellulose thinner is extremely corrosive and has a high rate of penetration.

## **Two different output stages**

are available for four detection ranges:



2 switching outputs in pnp switching technology



1 analogue output with an additional pnp switching output

## **Sensors with switching output have three operating modes:**

- Single switching point
- Two-way reflective barrier
- Window mode

## **Two three-colour LEDs**

always show the current state of the switching outputs or the analogue output.

## **With TouchControl**

all configuration can be done right at the sensor. The easily legible three-digit LED display continually shows the current distance value and automatically switches between millimetre and centimetre displays.

## **Setting a switching or analogue output**

can optionally be carried out by numeric input of the desired distance values, or using a Teach-in procedure. This permits the user to select the configuration method preferred. The hps+ sensors support synchronisation and multiplex operation and have extensive parameterisation options via LinkControl. (Further information on how to set up hps+ sensors can be found at [mic+ sensors](#).)

## **LinkControl**

consists of the [LinkControl-Adapter](#) LCA-2 and the LinkControl-Software and facilitates the configuration of the hps+ sensors via a PC or laptop with any conventional Windows® operating system.



*Sensor connected to the PC via LCA-2 for programming*

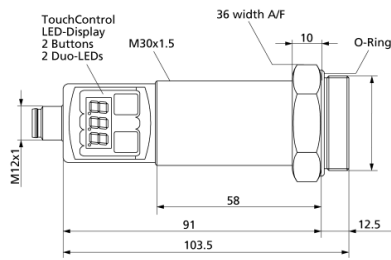
## ***You have special requirements?***

Nothing as simple as that.

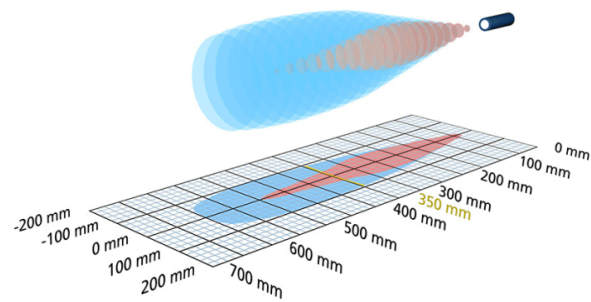
With us, you can easily find an individual solution. Let us talk about your application: +49 231 97 51 51-82.

# hps+35/DIU/TC/E/G1

## scale drawing



## detection zone



1 x pnp + 1 x analogue 4-20 mA / 0-10 V



|                 |                                                                                                                                 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------|
| design          | process connection G1                                                                                                           |
| operating mode  | proximity switch/reflective mode<br>reflective barrier<br>window mode<br>analogue distance measurement                          |
| particularities | druckfest bis 6 bar Überdruck<br>hohe Chemiebeständigkeit<br>Edelstahlausführung<br>Display<br>Prozessanschluss G1<br>UL Listed |

## Ultrasonic-Specific

|                      |                                                      |
|----------------------|------------------------------------------------------|
| means of measurement | echo propagation time measurement                    |
| transducer frequency | 320 kHz                                              |
| blind zone           | 85 mm                                                |
| operating range      | 350 mm                                               |
| resolution           | 0.18 mm to 0.45 mm, depending on the analogue window |
| reproducibility      | ± 0.15 %                                             |
| accuracy             | ± 1 % (temperature drift internally compensated)     |

## Electrical Data

|                             |                                            |
|-----------------------------|--------------------------------------------|
| operating voltage $U_B$     | 9 - 30 V d.c., reverse polarity protection |
| voltage ripple              | ± 10 %                                     |
| no-load current consumption | ≤ 80 mA                                    |
| type of connection          | 5-pin M12 initiator plug                   |

## outputs

|                             |                                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------|
| output 1                    | analogue output<br>current: 4-20 mA / voltage: 0-10 V, short-circuit-proof<br>switchable rising/falling        |
| Ausgang 2                   | switching output<br>pnp: $I_{\max} = 200 \text{ mA}$ ( $U_B - 2V$ )<br>NOC/NCC adjustable, short-circuit-proof |
| switching hysteresis        | 5 mm                                                                                                           |
| switching frequency         | 9 Hz                                                                                                           |
| response delay              | 84 ms                                                                                                          |
| delay prior to availability | < 300 ms                                                                                                       |

## Inputs

|         |                                    |
|---------|------------------------------------|
| input 1 | com input<br>synchronisation input |
|---------|------------------------------------|

## housing

|                                 |                                          |
|---------------------------------|------------------------------------------|
| material                        | stainless steel, plastic parts: PBT, TPU |
| ultrasonic transducer           | coated with PTFE film, FFKM O-ring       |
| class of protection to EN 60529 | IP 67                                    |
| operating temperature           | -25°C to +70°C                           |
| storage temperature             | -40°C to +85°C                           |
| weight                          | 210 g                                    |

## Technical Features/Characteristics

|                          |                                                                               |
|--------------------------|-------------------------------------------------------------------------------|
| temperature compensation | yes                                                                           |
| controls                 | 2 push-buttons + LED display (TouchControl)                                   |
| scope for settings       | Teach-in and numeric configuration via TouchControl<br>LCA-2 with LinkControl |
| synchronization          | yes                                                                           |
| multiplex                | yes                                                                           |
| indicators               | 3-digit LED display, 2 x three-colour LED                                     |

## Accessories

|                      |                                                                                   |
|----------------------|-----------------------------------------------------------------------------------|
| deployable accessory | LCA-2<br>LCA-2 Koffer<br>KST5G-2/M12<br>KST5G-5/M12<br>KST5A-2/M12<br>KST5A-5/M12 |
|----------------------|-----------------------------------------------------------------------------------|

## pin assignment

